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OCCUPATIONAL MOBILITY OF FARM  
PEOPLE IN THE BONNYVILLE  
DISTRICT -- A LOW-INCOME  
AGRICULTURAL AREA

by

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A THESIS  
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES  
IN PARTIAL FULFILLMENT OF THE REQUIREMENT  
FOR THE DEGREE OF MASTER OF SCIENCE

DEPARTMENT OF AGRICULTURAL ECONOMICS  
EDMONTON, ALBERTA.  
APRIL 14, 1966.



UNIVERSITY OF ALBERTA  
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Occupational Mobility of Farm People in the Bonnyville District - A Low-Income Agricultural Area", submitted by George E. Buckmire, in partial fulfillment of the requirements for the degree of Master of Science.



## ACKNOWLEDGEMENTS

The writer wishes to express his sincere thanks to his supervisor, Dr. T.W. Manning, who provided helpful advice, assistance and constructive criticism on the execution and reporting of this study. Grateful acknowledgements are also extended to Dr. W.B. Rogers for his ever willing advice and assistance in numerous ways.

Special thanks to other members of the Staff, particularly Vic Yanda, and to fellow graduate students for their constructive criticisms.

Last, but by no means least, the writer wishes to extend his grateful thanks to his wife, Cynthia, whose patience and incalculable assistance contributed so much to the successful completion of this study.



## ABSTRACT

The Bonnyville Municipal District is situated in Census Division 12. This area although endowed with considerable natural resources and potential for economic development is a marginal agricultural region. In terms of its unfavourable climate, some grey-wooded soils and location, the area is at a comparative disadvantage. These natural disadvantages were aggravated by the pattern of early settlement, the rigidity of land policy and accumulative social and economic problems. All of these factors have contributed to impede the development of the area, and to encourage a high level of unemployment and disguised unemployment.

Technological changes and urbanization have been taking place at a rapid rate in many parts of Alberta. This has served to influence rural-urban migration from the low-income Bonnyville District. Presumably, if this rate of migration was sufficiently high and was accompanied by farm consolidation, then income gains might accrue to those families remaining in farming. Evidently, however, the rate of off farm migration has not been high enough to bring about significant improvements in the social and economic welfare of the Bonnyville farm families. A higher rate of off farm migration had not taken place because certain personal, social-psychological and economic factors interacted to impede the occupational readjustments of these low-income families.

Most farm operators were dissatisfied with their income returns and though a significant proportion indicated willingness to leave farming, they had been unable to do so. Low levels of education,







lack of alternative job training and job opportunities, immediate security in farm living and an uncertainty about moving off farms, were among factors found to be important in contributing to the immobility of farm families. Education was the most important single factor. In the case of the children of these farm families, they had higher levels of education and had overcome the social and psychological impediments of their rural environment. They had successfully severed ties with the rural communities and had migrated to areas offering greater opportunities. Younger operators with more years of formal schooling who had remained in farming were more successful and had achieved greater security in this occupation than the older and less educated operators.



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## I. INTRODUCTION

In the course of economic growth structural changes are continually taking place in agriculture to meet the demands of a changing society. One major change in agriculture is the substitution of capital and technology for manual labour. These inputs in the form of machinery, fertilizers, insecticides, improved crop varieties and other improvements, enable a greater output from the industry. The inelastic demand for agricultural commodities, however, contributes to the accumulation of surpluses and the depression of farm prices. At the same time the costs of input factors used by farmers continue to increase at a faster rate than farm prices. Farmers are then faced with what has commonly come to be called "cost-price-squeeze".

The rapid introduction of technological improvements has contributed to the decline in the number of farms. In Canada the number of farms declined from 623,091 in 1951 to 521,634 in 1961, a reduction of 16 percent. This reduction was accompanied by an increase in the average size of farms and a higher capital investment required for successful farming. Heady summed up the consequences of this situation in the following way:<sup>1</sup>

In 1910, with major inputs being those of labor, the beginning or other farmer could make his living largely with the resources representing his human endowment. Pressure of economic development through factor markets touched him but little, because his own person represented the major input. In 1960, however, this situation was reversed, with capital representing over 70 percent of total inputs if land is included. Hence in later periods, capital and its investment in large scale becomes a necessary condition for success and income.

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<sup>1</sup>Earl O. Heady, Agricultural Policy Under Economic Development (2d ed.; Iowa: Iowa State University Press, 1965), p. 296.





One consideration arising from this statement is that even if small farmers did have the necessary resources, the capacity to absorb labour and capital is limited, unless labour intensive types of farming are carried on. Such farms are limited therefore to small scale operations and consequently low production. This low production in turn results in a small volume of output and consequently low net income. Many farmers respond to such circumstances by investing heavily in farm machinery, but this investment often proves uneconomical, and internal reorganization usually returns only a small increase in output.

Of major concern to social scientists and policy makers are the imperfections of the agricultural labour market which are magnified in the process of this reorganization and resource reallocation. Rural areas typically experience a higher natural increase in population than urban centres which induces a higher rate of growth of the labour force. The demand for farm labour is inelastic, therefore, a chronic labour surplus situation arises which accumulates as apparent and disguised unemployment. This oversupply has to be continually redistributed to other occupations or shifted off the farms in order to alleviate the problem. Over the years this process has been taking place but evidently not fast enough to permit low income farmers to experience significant farm consolidation and income gains.

An unprecedented rate of economic growth and industrialization has taken place in Canada since World War II. It does not appear that it is the inability of urban industry to absorb labour which causes a back-up into rural areas. It seems more likely that the problem arises from the inadequate training and preparation of large numbers of the rural labour force for non-farm occupations, and





from the inability of many farm families to readjust to the changing social and economic conditions. It appears further that many of these workers lack the motivations necessary to detach themselves and their families from these low-income areas to seek employment elsewhere.

### The Problem

The immobility of farm families and low returns to labour which have characterized scattered segments of the agricultural sector are not a new phenomenon. These inequalities, however, became more apparent as the rest of the economy progressed and agriculture lagged behind. Measured in terms of the gross national product both Canada and the United States have experienced rising national incomes. The gross national product of Canada exceeded \$47 billion in 1964, an increase of 9.3 percent over the preceding year, and in the United States it rose to \$628.7 billion, 7.5 percent over the record breaking figure of \$585 billion of 1963. Labour shared in this prosperity as personal income per person rose from \$979 in 1950 to \$1734 in 1960 for Canada. A parallel situation existed in the United States where per capita income increased from \$1,506 to \$2,219 over the same decade.

All sectors of the economy did not share equally in this prosperity. Most disturbing was the fact that the gap between Galbraith's "affluent society" and Harrington's "the other America" continued to widen,<sup>1</sup> In agriculture certain factors, both endogenous

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<sup>1</sup>John K. Galbraith, The Affluent Society (Cambridge: The Riverside Press, 1958) and Michael Harrington, The Other America (Baltimore: Penguin Books, 1964).



and exogenous (some of which were mentioned earlier) have impeded readjustments. The result of these impediments was that many areas in agriculture were by-passed leaving behind glaring pockets of economic decay and poverty.

Poverty is not a new concept. It is as ancient as the history of society itself. Poverty is a relative term which defies any generally acceptable definition. This fact often makes it an exercise in subjective evaluation to make a comparison between one country and the next, or even between one region and another within a large territory. The poor in Canada may be rich by Peruvian standards and the well-to-do in the West Indies may be poor by Albertan standards. The concept of poverty also changes in an historic context. Certain income groups considered middle class 30 years ago may be poor by present day standards.

The standard of living and often the social status of a family is determined by its earnings. This provides a useful criterion for categorizing groups in the society. Opinions are divided on the level of income which demarcates the poverty line.<sup>1</sup> Much of the available information is based on statistics published in the Census of Canada on income distribution of farm families.<sup>2</sup> Much of the published information tends to underestimate the standards of living requirements of farm families and the figures on low income

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<sup>1</sup>A brief discussion of some of the definitions used follows in Appendix I.

<sup>2</sup>The Agricultural Rehabilitation and Development Administration (ARDA) defines a low income farm family in 1961 as one which earned less than \$2,500 from the sale of farm commodities during the previous year. Such a farm should have less than \$25,000 capitalization and the farm operator did not work off the farm more than 25 days.





families and non-commercial farms reported by the Census will be greatly magnified if a higher and more appropriate level of income is used.

There were 436,225 farm families in Canada in 1961 according to the Census. Of these, 95,410 families or 22 percent fell into the low-income category according to the ARDA definition. An even more vulnerable group than farm families was the rural non-farm families. Failure on the farm inevitably spreads to the rural non-farm since in most rural areas all economic activities are dependent on farming activities. There were 294,349 low-income, non-farm rural families in Canada in 1961 (i.e., families earning less than \$3,000 per annum). This figure represented 43 percent of all rural non-farm families. Collectively there were in rural Canada approximately half a million low-income families or families with incomes not high enough "to allow them to live according to normally acceptable Canadian standards and not quite so low to bring about starvation".<sup>1</sup>

#### Regional Distribution

Rural poverty is present in all the provinces but varies in the extent. The areas of highest concentration are those of poor and marginal lands and those by-passed by economic activities. In 1961 the highest percentage of low-income farms was in the Maritimes where

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<sup>1</sup>"Rural Poverty: What Can ARDA Do?" Canadian Association For Adult Education, Pamphlet No. 1, Nov. 1964, pp. 1-2. The Hon. Maurice Sauvé also defined poverty on the basis of level of standards of living of the majority of Canadians. In an address to the Manitoba Farmers' Union in Winnipeg on December 1, 1964, he defined poverty as "a condition in which people are for any reason prevented from enjoying certain minimum advantages or benefits afforded by the level of civilization in Canada today".





33 percent had gross incomes less than \$2,500 a year. Quebec and Manitoba were next with 29 and 25 percent respectively, whereas Ontario, Alberta and British Columbia had the smallest proportion of low-income farms, 16, 19 and 15 percent, respectively.

The small rural villages and towns of less than 1,000 are too small to generate economic growth. Such towns are in many respects worse off than the farms where farmers can at least eke out an existence from the soil. In 1961 more than half the rural non-farm families in the Atlantic Provinces earned less than \$3,000. Quebec, Manitoba and Saskatchewan had 48 percent, while Ontario, Alberta and British Columbia had 39, 31 and 29 percent, respectively.

#### Some Non-economic Indicators of Poverty

Apart from these basic economic considerations there are some serious social consequences. Prolonged living in poverty generates social and economic isolation and creates a sub-culture in which people are alienated from the broader affluent society. Rural poverty cannot be analyzed solely in terms of personal income. To be poor means to be without material goods and, in addition, to be denied a sense of worth. People in low-income areas enjoy far less of the amenities of life which are considered as desirable and necessary by the rest of society. In terms of economic and other cultural participation, they are by-passed by the rest of society. For example, urban families consider such facilities as hot and cold running water, central heating, electricity, flush toilets, refrigerators and automobiles as essentials. The 1961 Census survey of rural dwellings found that 49.8 percent of rural households had no hot and cold





running water; 46 percent had no flush toilet; 29.9 percent did not have a private automobile. Though these comparisons are vulnerable and subject to value judgments, the items mentioned were commonly used in both urban and rural households and provide a useful index to measure the disparity between levels of living in both areas.

The capacity of an individual to earn a high income is often, although not always, determined by his educational qualifications. This provides another measure which has been used to assess the circumstances of families in depressed areas. Undoubtedly, education was the most important single factor contributing to any differences between progressive urban society and the backward rural areas. In trying to assess the significance of education, the Agricultural Rehabilitation and Development Administration (ARDA) pointed out that the capacity or ability of a man or woman to earn higher wages is drastically curtailed in a person with no more than four years of formal schooling. In Canada there were over one million men and women with less than four years of formal schooling which represented 9 percent of all Canadians of working age. There were over two million with Grade VIII or less.

School drop-outs constitute another serious problem faced by the rural population. One out of every two rural youths was dropping out of school before Grade IX in 1961. The Census reported 3,286,258 rural youngsters of school age and over who were not attending school and of these 656,566, or approximately 20 percent, had a Grade IV education or less. Individuals with such low levels of education were placed at an immediate disadvantage in terms of employment opportunities and higher earnings. Furthermore, the mobility or



capacity of such individuals to shift to new areas or to new job opportunities was seriously handicapped. A greater proportion of the disadvantaged youths were from low-income families because farmers with better incomes were able to pay the cost of tuition for higher education and keep their children longer in school.

These statistics emphasize the problem but do not provide a basic understanding of the factors which impede the mobility of low-income farm families. In recent years the problem has received considerable attention from sociologists, economists and government officials. Research work conducted in this area leads to the conclusion that there are many factors of a personal, economic, social-psychological nature, which contribute to this immobility. Unfortunately, there is not enough agreement on the variables thus far isolated, neither is there enough understanding of their inter-relationships. However, there is some indication that they all interact to create barriers or impediments which serve to box-in certain individuals in rural slums and stagnating farm economies.

### Basic Concept

This study was concerned with resource transfer, particularly with the transfer of human resources, farm families and farm labour from low productive agricultural areas. The term commonly applied to such shifts of resources is mobility. In this study mobility was employed in the sense as described by Nelson. He considers the movement of people as social mobility which is of two types, horizontal and vertical.<sup>1</sup> "Horizontal mobility refers to the movement of persons

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<sup>1</sup>Lowry Nelson, Rural Sociology (New York: American Book Company, 1948), p. 122.





from one place to another and is ordinarily comprehended under the familiar term of migration". Migration according to Nelson "is a change of location of a person or a group in physical space".<sup>1</sup> In the present study, however, migration was used only in a limited sense implying movement of farm families from a low-income farming area to non-farm occupations. "Vertical mobility", Nelson defines as "the movement from one social status to another, such as from occupation to occupation". This change in status was not a principal consideration in this study but only an incidental one insofar as changes from farming to non-farm occupations involved a change of status.

Having defined mobility, it is necessary to make a further qualification. The study was not concerned primarily with the characteristics of migrants but with the characteristics of those who were willing to migrate from the farms but had not done so at the time the survey was made. In other words, the hypothesis dealt with factors which contributed to the immobility of persons in low-income farm areas such as a low level of education, lack of knowledge of alternative job opportunities and community attachments, and how these variables were interrelated. These and other variables defined in the hypothesis are referred to as impediments to occupational mobility.

### Objectives

This study had several objectives, the most important of which was to provide more information and understanding of those

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<sup>1</sup>Ibid.





factors which contributed to impede occupational readjustments of people who, though part of an affluent society, are living on the brink of destitution in terms of the society. The second objective was really a prerequisite to the first. It was to determine what were some of these impediments, to isolate them, and to establish how they were interrelated and acted as impediments. Thirdly, the study aimed at providing some basis for predicting the circumstances under which such people will migrate from a low productive area or industry.

The justification for this study lies in the area of economic planning and economic growth. To achieve a full employment economy, to provide a more equitable distribution of wealth, in other words, to alleviate the areas of poverty which continue to disgrace so many rural and urban districts, there must be some understanding of the circumstances which should be created and services which must be provided to encourage or accelerate mobility or resource transfers. The study attempts to contribute to that understanding.

### Hypothesis

This study was centered on occupational readjustments and the aspirations of low-income farm families for social and economic betterment. There are numerous variables associated with occupational mobility and it would be an exercise in superficiality to undertake an investigation of too many of these variables in a single study. Accordingly, in this study only a few variables were selected and these were considered in four categories, namely, (1) personal: age, education; (2) occupational: alternative skills and job training, knowledge of job opportunities; (3) social-psychological: personal attitudes



(towards farm and non-farm occupations and the rural community), social participation and levels of living; (4) economic: investment, equity, and farm income.

The dependent variable in this study was potential mobility. This was defined as the individual's degree of readiness or willingness to leave farming for another occupation. The independent variables were the social, economic and other variables mentioned above. The design of the sample and the selection of empirical procedures were built around a major hypothesis and several minor hypotheses. The major hypothesis was formulated as follows:

Farm operators remain in low-income and low productive agricultural areas because of certain personal, occupational, social-psychological and economic factors which tend to impede their mobility into other occupations.

The following minor hypotheses were generated from the selected variables associated with the major hypothesis:

1. Impediments to mobility are directly related to advanced age and low levels of education.
2. Potential migrants are more likely to be low-income farm operators without alternative job training and job skills, and who lack knowledge of alternative job opportunities.
3. Potential migrants are more likely to be low-income persons who have a sense of security living on the farms, low levels of social participation and low standards of living.
4. Potential migrants are more likely to be low-income persons with relatively high investment and low equities in the farm business and with little or no capital to permit them to migrate.





## Procedure

### Definitions and Basic Assumption

A population in statistical analysis is defined as "the aggregate of all cases that conform to some designated set of specifications".<sup>1</sup> For the purpose of this study the population consisted of farmers in a selected low income agricultural area. The basic elements of this population were the farm family units. In each case the respondent was the head of the household or farm operator. Other than this no discrimination was made on the basis of age, sex, income, or size of the farm.

Most studies on mobility and migration draw samples from the migrant population and endeavour to establish the characteristics and motives of this population. The findings are then extrapolated to non-migrant populations in defined areas. The assumption here presumably being that the characteristics and motives of the migrants are similar to, or identical with, those of the non-migrants. This study avoided such an assumption and, moreover, was concerned with "potential mobility" as defined on Page 11. The basic assumption in this study was that of most economic theory, i.e., the rationality of individuals. Specifically this means that given a choice, people will choose the alternative which makes them "better off" in an economic welfare sense.

### Area and Method of Sample

The sample was drawn from Census Division 12 which constituted

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<sup>1</sup>Claire Selltitz, Marie Jahoda and Stuart W. Cook, Research Methods in Social Relations (New York: Holt, Rinehart and Winston Inc., April, 1963), p. 509.





one-fifth of the total land mass of Alberta in 1961. There were in this Division 4,494 farms occupying only 5.8 percent of the total area and concentrated in the southern part of Census Division 12. The farm population of 18,752 was unevenly distributed with a higher density in the southern section and scattered in the north. In view of this type of distribution and the limited resources and time available completely random probability sampling was not considered as the most feasible plan. It was decided instead to employ a method of sampling which combined a non-probability and a probability sampling procedures. Further details of this plan and procedure are outlined in Appendix II.

## II. THE POPULATION AND NATURAL RESOURCES OF THE STUDY AREA

Economic growth or lags in economic growth are not spontaneous activities. They are the result of the interaction of physical and cultural factors. The problem examined in this study evolved from the early organization and growth of the Bonnyville Municipal District in relation to its natural resources. The problem, therefore, is best perceived and examined in the context of the social and economic history of the area.

### Population

#### Population Changes

The early settlement and population growth in the Bonnyville Municipal District can best be understood in the context of the growth and development of the Province in particular and the Prairie Provinces in general.



Alberta's population growth was interwoven in the circumstances of the development of a last prairie frontier. It is a story of economic prosperity and depression, the impact of two world wars, the failures and successes of early settlements and subsequent resettlement and readjustment, and finally, a period of rapid recovery in the framework of balanced economic growth.

The economic history of Alberta, as that of Canada itself, was strongly influenced by conditions in Europe. In the wake of the industrial revolution there was a rapid growth of population in Western Europe and some parts of North America. The change from an agrarian to an industrial economy and the growth of the urban population created large and growing demands for food and Canadian grain. Demands for western grain and price incentives encouraged the rapid expansion of agriculture and the flow of immigrants into the region. Another incentive was the cheapness and availability of land. According to Haythorne:

The ease with which land could be obtained in the western provinces under the free homestead plan or through purchase, and the line of rapidly growing settlements in the Prairie Provinces attracted many young men and women from<sup>1</sup> older communities in Ontario, Quebec and the Maritimes.

It was estimated that between 1896 and 1913 when the flow of immigrants reached a peak, more than one million people moved into the Prairie Provinces and the population had increased from 7 percent to 20 percent of that of the whole country. World War I brought a temporary end to the large flow of immigrants from Europe and a further delay was caused by a severe drought in the early 1920s. It was not until the latter

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<sup>1</sup>George W. Haythorne, Labour in Canadian Agriculture (Harvard: Cambridge University Press, 1960), p. 26.





half of the 1920s that the large flow was resumed. From 1926 to 1929 between 51 and 57 percent of the immigrants coming to Canada were in the farm group. The majority of these settled in Western Canada.

The great depression of the 1930s marked a milestone in the history of the economic development of North America. During these years farm prices fell from the prosperous levels of the 1920s. In a typical fashion farmers responded by maintaining production levels in the face of falling demand. Total acreage under cultivation in Canada increased by six million acres and the number of farms by 4,000 over the decade. Non-farm industries, however, responded differently; many were forced to cut back production and reduce employment. Large numbers of unemployed workers migrated to the farms, thus creating a surplus labour situation.

The last period may be said to have started just prior to World War II or indeed the recovery from the 1930s' depression might have been precipitated by the commencement of the war. Whatever the reason, during this period there was increased demand for western grain in international trade and the exploration of natural resources accompanied by rapid industrialization. All these activities provided impetus and direction to the development of the economy and population growth.

The population of Alberta increased from 939,501 to 1,331,944, or 41.8 percent, from 1951 to 1961. In Census Division 12, the population increased 18.6 percent during the same period but it declined relative to Alberta's population from 4.3 percent in 1951 to 3.6 percent in 1961.





Population Changes in the Bonnyville Municipal District (Census Division 12)

The growth of population in the Bonnyville Municipal District reflects the pattern of growth in population in the Prairie Provinces. Bonnyville experienced its highest rate of population increase during the two decades 1911 to 1931. In 1911 the Census reported for the first time the population of Bonnyville as 841. Ten years later the population had almost trebled to 2,515. During this period many of the immigrants to Western Canada were from Western Europe, but World War I brought a temporary end to the flow of immigrants. Settlers moving into Bonnyville at this time were mostly from Quebec. It was not until the late twenties that immigrants from Western Europe began to settle in Bonnyville. The majority of these settlers were Ukrainians, but the immigrants included some Poles and Germans. Movement of population into the area was also brought about by the severe droughts in the south of the province.<sup>1</sup> These settlers were mostly those of British origin who had earlier settled in the south.

The population of the Bonnyville District has shown smaller rates of increase since 1931, with the exception of 1951 when the Census reported an 11 percent decrease. This reduction was due to the movement of farm workers into non-farm jobs during World War II. Following the war, however, there was a further increase in population as workers returned to farming. There was also some settlement of war veterans.

The overall increase in the Bonnyville population tends to obscure the internal adjustments which were taking place. Prior to the

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<sup>1</sup>B.H. Kristjanson and C.C. Spence, Land Settlement in Northeastern Alberta, 1943 (Ottawa: Dominion of Canada - Department of Agriculture, publ. No. 800, Tech. Bull. 63, September, 1947), p. 10.



1940s there was little occupational differentiation in the population which was predominantly agrarian. However, small changes were taking place in the process of growth of small rural towns and villages. The urban and rural populations showed numerical increases up until 1956. The population of the small towns and villages reflected a much higher rate of increase than the farms and small settlements. The non-farm population more than quadrupled in the decade 1951 to 1961 (Table I). On the other hand, the population on the farms and small settlements reflected a 28 percent increase in 1956 but declined by 4 percent in 1961. The impact of technological change and urbanization had reached Bonnyville, and farm labour and farm families were migrating from the farms to the larger rural towns and cities. This movement of the population from the farms has helped to relieve the problem of surplus labour. The rate of off-farm migration, however, has not been high enough to bring about significant improvements in farming and living conditions of those remaining in farming, as is evident from the present conditions. Apart from the apparent unemployment there is also considerable disguised unemployment; hence, a much higher rate of off-farm migration, and farm consolidation would be necessary if gains are to accrue to those remaining in farming.

### Population Characteristics

#### Ethnic Background and Language

The ethnic background and language of the population of Census Division 12 in 1961 were representative of the Province as a whole in their heterogeneity, yet the proportionate composition showed





some striking differences. During the period of rapid immigration, the majority of the immigrants came from Central and Western Europe. By 1941, the French and Ukrainians represented more than half of the population in the area while the third largest group was the British. This set the Division somewhat apart from the others where the British were in the majority. Other prominent groups in Census Division 12 included Germans, Poles and Scandinavians.

TABLE 1  
POPULATION OF CIVIC DISTRICTS, CENSUS DIVISION 12

Civic District	1951	1956	1961	1964
St. Paul County (#19), total	9041	7979	7431	
Towns and villages	1860	2823	3515	4122
Farms and small settlements	7181	5156	3906	
Bonnyville (M.D. #87), total	6744	10058	10209	
Towns and villages	1139	2906	4851	5702
Farms and small settlements	5605	7152	5358	
Smoky Lake County (#13), total	6291	5517	4913	
Towns and villages	1108	1385	1484	1679
Farms and small settlements	5183	4132	3429	
Northeast, total	39886	44947	47310	(48700) <sup>a</sup>
Towns and villages	5938	9191	12350	14284
Farms and small settlements	33948	35756	34960	(34416)
Farm	27123	24281	19199	(16200)
Non-farm	12763	20666	28111	
Difference	6825	11475	15761	(18216)
Farm, percent of rural	80%	68%	55%	47%

Source: Canada, Dominion Bureau of Statistics, Census of Canada, Bull. 7.1-2, 1961.

a. Figures in parenthesis extrapolated by W.M. Schultz.

The various ethnic groups settled in small communities during the early settlement. The occurrence of such closed groups contributed





to certain community problems, particularly in terms of education. At the same time, rivalry among the various communities had often hindered the introduction of certain public services.

English was the predominant language spoken throughout the area, although many of the older settlers spoke only their mother tongue. This was usually regarded as a second language by the younger generation, many of whom were bilingual.

These small communities, while they provided a closely knit society, hindered the social mobility of their members and impeded their assimilation into the larger society. The inability of many older people to speak the language of the larger society was a major handicap to social mobility and contributed to their social isolation.

### Religious Affiliations

Two-thirds of the population in Census Division 12 were members of the Roman Catholic and Eastern Orthodox Churches in 1961. This was much higher than the provincial or national proportions which were 29 percent and 48 percent, respectively. The Roman Catholic Church was instrumental in initiating early settlement of the region and the influence of the church remained strong. In many areas in Census Division 12, the church provided the only opportunities for socializing. Many studies have demonstrated the role of the church in providing social intercourse. However, there was no clear evidence that this role influenced mobility. Participation in church activities and the informal nature of the rural church exerts a strong influence on the more zealous. On the other hand, religious interest is shared in common by urban and rural people. This common religious interest, together



with the widespread availability of church facilities, suggest that religious affiliation is not a strong deterrent to mobility.

### Family Size and Characteristics

The tendency of the various ethnic groups to settle together in small communities and the very nature of farming, contributed to many of the characteristics of rural families in the Bonnyville District. The rural family in Alberta was typically larger than the urban family (Table 2). Families in the Bonnyville Municipal District were on the average larger (4.6) than corresponding family size for the Province (3.8) and Canada as a whole (3.9). The average number of children living at home was also larger in Bonnyville (2.5) and Census Division 12 (2.4) than for Alberta (1.8).

Past research work has shown that family size can be both a deterring and contributing factor to mobility. Family heads with low levels of education find greater security on the farms with their families, so they are less willing to migrate. On the other hand, farm families in low income areas who do not suffer from such handicaps often move to the cities in search of better opportunities.

TABLE 2

NUMBER OF PERSONS PER FAMILY, 1961

Type of Family	Average Number of Persons per Family			
	Bonnyville Municipal District	Northeast (C.D. 12)	Alberta	Canada
All families	4.55	4.5	3.8	3.9
Rural families	5.02	4.54	4.2	4.3
Farm families	n.a.	n.a.	4.2	4.5
Urban families	4.6	4.2	3.7	3.7

Source: Canada, Dominion Bureau of Statistics, Census of Canada, Bull. 2.1-5, 1961.







Age and Sex Distribution

There were few younger single women on the farms in the Bonnyville District. Evidently, the rate of out-migration was higher among younger women than it was for males in the same age groups. The ratio of males to females far exceeded the provincial and Canadian averages in 1961 (Table 3). There were 122 males per 100 females for the rural farm in Census Division 12 which was slightly higher than rural non-farm.

TABLE 3  
NUMBER OF MEN PER 100 FEMALES, 1961

	Census Division 12	Alberta	Canada
Total	116	107	102
Rural Farm	122	122	118
Rural Non-farm	116	113	109
Urban	104	101	98

Source: Canada, Dominion Bureau of Statistics, Census of Canada Rural and Urban Population, Bull. 7.1-2, 1961.

The average number of children under 24 years of age living on the farm with their parents was higher in the Bonnyville District than the average for the province. The majority of these children were pre-school or school age. Very few of those who had left school lived on the farms with their parents. The implication of a higher proportion of persons in the unproductive age to rural families is summed up by Bertrand in the following way:

These differences in age structure have some definite consequences for rural and urban societies. When expressed in terms of dependency ratios (the number of persons under 15 years of age and over 65 years per each 1,000 persons between 15 and 65 years) these differential age structures mean that each 1,000 persons in the



productive years of life in the rural farm population support a considerably larger number of persons than their counterparts in the rural non-farm and urban populations . . . This fact alone could account in a large measure for the difference between the levels of living prevalent among rural people and those of urban folk.<sup>1</sup>

### Education

The influence of the school on children of school age is second only to the influence of the family. This influence extends to a larger proportion of the population than does any other agency. The rural school unlike the urban school, does not compete with so many other organizations for the pupils' time and attention; and, therefore, its influence is much stronger. Education is one of the more important variables influencing mobility. Many studies have shown that people with low levels of education are less mobile than those with higher levels of education. This fact makes an understanding of the organization and goals of the rural education system a necessary prerequisite to an appreciation of problems facing the rural community.

Rural education in Alberta has historically suffered from many drawbacks. The early problems derived basically from two sources. The first was the sparse distribution of the rural population and the second was the reliance on land tax as the major source of income. These factors resulted in the establishment of a large number of school districts with too few pupils and it led to financial difficulties in terms of a relatively high cost of instruction per pupil and low salaries for teachers. Uhlman writing on the changes over the years pointed out that "the heritage from the past has provided the reasons for recent

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<sup>1</sup>Alvin L. Bertrand, Rural Sociology (New York: McGraw-Hill Book Company Inc., 1958), p. 57.





major innovations in the administration of education in rural Alberta".<sup>1</sup> These changes involved consolidations, establishment of rural high school areas, and school divisions. All of these changes constituted an attack upon a problem which originated with the creation of large numbers of small school districts. Inclusion agreements were devised to overcome the disadvantages resulting from the independent operations of many small town and village school districts. The Alberta county was conceived as a means of combining under a single local authority all locally administered functions and services. The changes in the structure brought significant improvements in the training and education of the rural population. Prior to World War II, the province was almost entirely dependent on agriculture, and education, particularly in rural schools, was agriculturally oriented. The post war economic growth and population changes brought about a new emphasis on technical and vocational training. This resulted in a joint federal and provincial government program of technical and vocational training initiated in 1961. The establishment of the Northland School Division was a major innovation in 1960 which provided for the setting up of schools in widely scattered settlements in the North. There were 55 schools in the Northland Division, 26 of which were in Census Division 12 in 1961.

Some of the more immediate benefits resulting from these changes included (1) a higher investment per pupil which exceeded the provincial average in 1961, (2) teachers' salaries which had averaged 15 percent below average came within seven percent of the average and (3) operating expenditures per pupil grew faster than for

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<sup>1</sup>Harold J. Uhlman, "A Study of the Impact of Demographic and Economic Changes in Rural Alberta in Financing of Education" (unpublished Ph.D. dissertation, Department of Education, University of Alberta), p.43.





the province as a whole. This increase had been even more significant for building expenditures.<sup>1</sup>

### Levels of Living

Today Canadians have come to enjoy one of the highest levels of living in the world and per capita income is one of the highest. In spite of these favoured circumstances there continue to exist much inequality in the living standards of certain groups of people in many parts of the country. Kristjanson observed this inequality in the Bonnyville area more than one score years ago and commented as follows:

In the final analysis, as the people of the world acquire more economic independence, their choice of vocations will become increasingly sensitive to the level of living which they associate with the opportunities available to them. And, is it not reasonable to expect that the nation will become more concerned about the sociological aspects of the pioneer areas, particularly if it could be demonstrated that with reasonable financial assistance at least some of the sacrifices which have hitherto been made in the level of living in order to accumulate working capital could be avoided?<sup>2</sup>

A significant number of Bonnyville families can be numbered among those at the bottom rung of the ladder. But as Kristjanson opined, the nation is now more concerned about this disparity and about the social and economic welfare of these people.

Kristjanson employed a modified form of the scale developed by Edwards to measure "levels of living" of farm families in three areas of rural Alberta in 1943.<sup>3</sup> The results showed that only four percent of

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<sup>1</sup>Wolfgang M. Schultz, "The Socio-Economic Characteristics and Resources of Rural Alberta - Census Division 12", University of Alberta, Edmonton, Alberta, Agricultural Economic Research Bull. No. 2, 1966, p. 60.

<sup>2</sup>Kristjanson and Spence, op. cit., p. 38.

<sup>3</sup>Ibid.





the Bonnyville homes had electricity and six percent had central heating, most had coal or wood heaters. A large percentage of the families received a daily or weekly newspaper but only 15 percent had ten or more books at home. In all the measurements Bonnyville lagged behind the Red Deer-Wetaskiwin area.

Since 1951 the Canadian Census has reported certain items used in level of living scales. An examination of the possession of these items suggested that levels of living in the Bonnyville District lagged behind the rest of the Province. Census Division 12 ranked lowest using any of the following four criteria: (1) average farm value, (2) average sales per farm, (3) percentage of farms without automobiles, (4) percentage of farms with electricity.

#### Employment Opportunities and Family Earnings

##### Employment Opportunities

Census Division 12 reportedly has the largest reserves of petroleum in Canada along with other mineral deposits. These natural resources were largely unexploited and provided limited employment opportunities in 1961. Agriculture remained the major occupation in the area. Earnings from farming were on the average smaller than in most other parts of the province and many farm operators found it necessary to undertake part time employment to improve their family earnings.

The total labour force in the Division in 1961 was 15,728. Of these, 7,256 persons or 46.1 percent (farmers and farm workers) were





employed in agriculture. This was much higher than the provincial average which stood at 21 percent. The next largest category of employment was in the "Services and Recreation" which employed 17.4 percent of the labour force followed by "Craftsmen Production and Related Workers", 8.7 percent. "Mining" provided only 0.11 percent of the total employment (provincial figure was 1.05 percent). Some "Clerical and Sales" employment opportunities were available in the larger towns such as Bonnyville, St. Paul and McMurray.<sup>1</sup>

The 1961 Census reported 8,013 persons classified as wage earners in Census Division 12. Of these, 1,107 or 13.7 percent were living on farms. This was higher than the provincial (6.9 percent) and national (4.3 percent) averages. With the exception of farming which seasonally provided more jobs than the supply of farm workers, only a limited number of jobs were provided for labourers on roads and in construction. The Air Force Base at Cold Lake employed a number of persons full-time and part-time. Though workers living on farms constituted a sizeable proportion of total wage earners, the region nevertheless ranked low compared to other parts of Alberta in the number of wage earners per 1,000 farms.

#### Non-Farm Family Earnings

Due to the slow rate of economic growth and limited employment opportunities, family earnings in Census Division 12 were about the lowest in Alberta and lower than for most parts of Canada. There were 16,290 families or approximately nine percent of all the families

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<sup>1</sup>Canada, Dominion Bureau of Statistics, Labour Force, Census of Canada: 1961, Bulletin 3.1-8, Table 15.



enumerated in Alberta in 1961 earning less than \$3,000. Eleven percent of the families in Census Division 12 earned less than \$3,000. The average earnings per family was \$4,000 whereas for the province as a whole it was approximately \$5,000 (Table 4). The median earnings were \$1,000 lower in Census Division 12 than for Alberta.

Some families relied solely on the earnings of the male head of the household. Twenty percent of the male heads of families in Census Division 12 earned less than \$2,000 as compared with 8.2 percent for the province. The number of persons earning less than \$3,000 in Census Division 12 was in the ratio of two to one compared to the province.

#### Farm Family Earnings

Monetary income is not always an entirely satisfactory measure to assess the economic position of farm families. One has to consider that most farm families do not pay rent and are able to produce many of the things they consume, unlike the non-farm family. Nevertheless, there is a minimum income below which such families are unable to provide adequately even their limited conveniences. This figure, according to the Agricultural Rehabilitation and Development Administration, was \$2,500. In Alberta approximately 19 percent of all farm families earned less than \$2,500 in 1961. The comparative figure for Census Division 12 showed that there was a higher concentration of low-income farm families in the region. More than half of these families grossed less than \$2,500 annually from the sale of farm produce.





TABLE 4

EARNINGS OF HEAD AND FAMILY EARNINGS, BY GROUP, CENSUS DIVISION 12 AND ALBERTA, <sup>a</sup> 1961

CENSUS DIVISION 12										ALBERTA			
		Number of Family Heads by Earnings Group		Percent of Total		Number of Families by Earnings Group		Percent of Total		Number of Heads of Family by Earnings Group		Percent of Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Under	\$2,000	736	20.55	630	17.69	19,844	11.23	14,238	8.16				
\$ 2,000 - \$2,999		512	14.29	400	11.23	22,004	12.46	16,290	9.34				
\$ 3,000 - \$3,999		785	21.92	633	17.77	42,696	24.17	31,149	17.85				
\$ 4,000 - \$4,999		962	26.86	907	25.46	39,517	22.37	35,020	20.07				
\$ 5,000 - \$5,999		281	7.84	405	11.37	22,306	12.63	26,606	15.25				
\$ 6,000 - \$6,999		137	3.82	239	6.71	12,782	7.24	19,128	10.96				
\$ 7,000 - \$9,999		147	4.10	297	8.34	12,502	7.08	24,013	13.76				
\$10,000 and over		21	0.58	51	1.43	4,965	2.81	8,049	4.61				
		3,581	100.00	3,562	100.00	176,616	100.00	174,493	100.00				
Average Earnings	\$	3,498	-	4,011	-	4,242	-	4,985	-				
Modal Earnings	\$	4,000 - 4,999	-	4,000 - 4,999	-	3,000 - 3,999	-	4,000 - 4,999	-				
Median Earnings	\$	3,000 - 3,999	-	4,000 - 4,999	-	4,000 - 4,999	-	4,000 - 4,999	-				

<sup>a</sup> Does not include number of heads and families not stating wage and salary.Source: Canada, Dominion Bureau of Statistics, Census of Canada, Bull. 2.1-10, Table 84, p. 84, 1961.





## Physical Conditions

### Climatic Conditions

Climate and soil factors play an important role in determining the economic activities of man. In farming areas these factors are particularly important and contribute immeasurably to the success or failure of agriculture. Generally climatic conditions in most of the province favour agriculture except in the arid south-east and far north. In the south-east, however, irrigation is used extensively. In the north-east the climate is characterized by a transition from the prairie to the northern climatic regions. The summers are warm with mean daily July temperatures ranging between 60° and 65°F. Precipitation is often a limiting factor in some areas but not generally so. The mean annual precipitation ranges from 14.0" at Cold Lake to 17.3" at Lac la Biche and the mean annual temperatures range from 30° to 31°F. In general, the precipitation is adequate for the growing of fairly good crops, but the growing season is short. Crops are frequently damaged by frost. Hail damage occurs occasionally but larger losses are suffered due to frequent adverse fall conditions.

### Soil Conditions and Management

The cause of low farm incomes is often attributed to small farms and poor soil conditions. Enough evidence is now available to suggest that although these are important contributing factors they can be controlled to considerable extent. Important determining factors are management and capital. In an area where poor soil conditions are combined with small acreage, poor management and unfavourable weather conditions, the probability of success in farming is much reduced. On the other hand, proper management





with application of fertilizers, capital and other inputs can often make a success of farming even when soils are poor.

The Bonnyville District is characterized by some of the limiting factors mentioned above. A considerable portion of the area was typified by poor to marginal lands for farming. This limitation was aggravated by poor management. There was very little evidence of serious planning by farmers in the area. Many farmers did not know one or two weeks ahead how many acres they were going to sow in the spring of 1965. Weather and time dictated their farming programmes. Few farmers practised any form of rotation and soil conservation practices were little in evidence. Many farmers used fertilizers but others considered it an expensive luxury, but neither did they use legumes.

Since much of the soils in Bonnyville are classified as grey wooded, proper management is extremely important. Much of the farming takes place in areas of dark grey and black soils, but these are surrounded by areas of grey wooded soil which have much lower fertility than grassland or the black soils. In general the area is a relatively level plain with a slight slope to the east; there is some rolling land north and east of Muriel Lake and north and west of Rat Lake. Originally the area was part parkland and part fairly thickly tree covered. Aspen poplar is the original tree growth. Some evergreens are found principally in the muskegs and along the sand ridges.

### Farming

#### Size and Distribution of Farms

The history of settlement of this area goes back to the first





decade of the twentieth century but the greater proportion of the area was settled after the 1930s. Settlers migrated to the area under several schemes available at the time. The majority, however, were homesteaders who were able to obtain undeveloped crown lands for homesteading. Under this scheme settlers were limited to one quarter section for which the registration fee was \$10.00. By "proving up" the homestead through the completion of improvement and residence requirements, the settlers obtained clear title to the land.<sup>1</sup> The homestead policy was discontinued in 1939 and was replaced by Agricultural Leases which first stipulated a 20 year renewable term. In 1947 the terms were amended to grant the settler clear title. Other arrangements included the Canadian Pacific Railway "Brush Contract" and Private Leasing.

The early policy of settlement necessarily determined to a large extent the subsequent conditions of farming and the pattern of development. The early farming was essentially under the homesteading plan which provided no financial assistance but required the settler to fulfill some programme of development. This policy encouraged small and subsistence farming since farm operators were forced to seek off-farm employment to eke out a living and develop the homestead. The average size farm was one quarter section during the early period of settlement. In 1961 the average size of farms in the area had increased to 415.5 acres. Nevertheless, this was one-third below the size of the average Alberta farm, but the 240 to 400 acres model unit was the same as for the province as a whole.

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<sup>1</sup>T.S. Rackman, Back to the Land (Ottawa: Canada Department of Agriculture - Marketing Service, Economics Division, March 1953), p. 4.





## Type of Farming

The factors discussed above, including soil, climate, the early subsistence farming and management have all contributed to the nature of farming in the area. Mixed farming was the predominant type since the area was best adapted to such farming. The short growing season, the occurrence of frequent droughts, and relatively favourable marketing conditions for livestock, particularly hogs, favoured livestock farming over grain (Table 5).

TABLE 5

COMMERCIAL FARMS BY TYPE, ALBERTA AND CENSUS  
DIVISION 12, 1961

Type of Farm	Alberta	Census Division 12
	(percent of all farms)	
Dairy	4.5	3.5
Other Livestock	40.6	52.8
Poultry	1.1	0.6
Wheat	20.5	13.8
Small Grains	15.5	7.8
Misc. Speciality	0.6	1.6
Mixed	15.5	19.9
Livestock	10.0	15.5
Fieldcrops	3.5	2.1
Other	3.8	2.3

Source: Canada, Census of Canada, Vol. V, Agr. Bull, 5, 3-3:  
Alberta, 1961.

## Livestock

Census Division 12 had slightly more livestock per unit of agricultural land than the rest of the province. There were nearly twice as many milk cows and horses as elsewhere, but fewer sheep and beef cattle. One indication of the intensity of livestock production was obtained by comparing returns from these enterprises. In 1961 returns



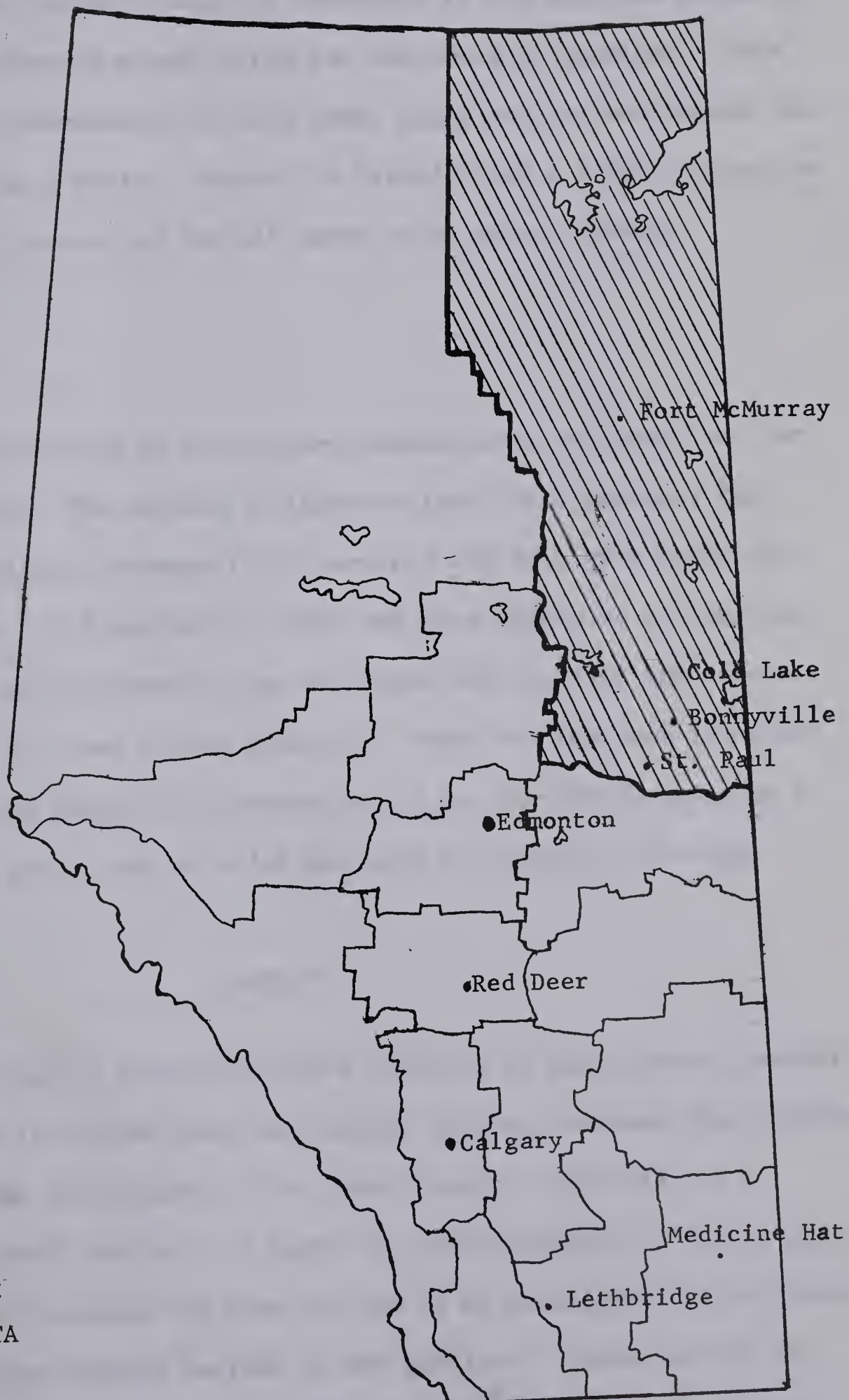


FIGURE 1  
CENSUS DIVISION 12  
PROVINCE OF ALBERTA  
CANADA





from the sale of livestock per acre and per farm were \$3.50 and \$1,454, respectively, and for crops \$2.11 and \$879, respectively. More than half the farm receipts were from the sale of livestock and livestock products. Another measure of the importance of livestock in the area was gained by examination of number of animal units per 100 acres of farmland. This showed a higher concentration of milk cows, pigs, poultry and horses than for the province as a whole. Bonnyville District had a higher concentration than Census Division 12 for all these units except horses.

### Crops

Census Division 12 had proportionately less cropland than for Alberta as a whole. The percent of improved land (50.6 percent) fell short of the provincial average (53.6 percent) and both were below the Bonnyville figure (54.9 percent). There was more extensive utilization of farmland but proportionately more wasteland and woodland and less pastureland than the rest of the province. Wheat was the most important cereal grown in the Bonnyville District as it was for the Division as a whole. Next was oats, much of which was used for feeding livestock.

### SUMMARY

The foregoing survey of Census Division 12 precipitates several conclusions. It is evident that the region, although endowed with considerable potential for development of its other natural resources, is a marginal agricultural region. In terms of its unfavourable climate, grey-wooded soils and location, the area was and is at considerable disadvantage compared with other farming regions in the province. These natural disadvantages were aggravated by the pattern of early settlement and rigid



land settlement policies which allocated small quarter-section farms irrespective of land productivity and which did not encourage expansion of small farms. The rapid inflow of settlers and the growth of small closed ethnic communities encouraged traditional farming and further contributed to the misallocation of human resources and over-utilization of the diminishing fertility of the land.

A further conclusion is that no single factor can be identified with the present impoverishment of the region. It is evident that physical and cultural factors converged together and brought about the economic stagnation. The lesson drawn from this survey is the need to investigate the interrelationships of the different variables and the implications for economic development.

### III. REVIEW OF LITERATURE

#### Theoretical Review

The role of agriculture in the process of economic development has been the topic of much debate. It is generally recognized that the development of most advanced countries has been facilitated by the contributions made by the agricultural sector to the rest of society. In the process of development the changes which take place within the agricultural industry and rural areas are also well documented. In the early stages of development the demand for labour in agriculture is elastic. As technological change and urbanization take place the demand for labour in non-farm industries increases but demand for labour in agriculture becomes inelastic. Farm labour migrates to urban centres in response to what is now commonly referred to as the "push and pull forces". However,





rural-urban migration does not take place evenly and without interruption. Certain areas are less responsive to the "push and pull forces" and there is a tendency for labour to accumulate on the farms and in small rural settlements. In such areas there are often lags in economic growth compared to the progress made in the rest of the society. In this section some of the changes which take place in agriculture and the literature which discusses these changes are reviewed.

An important change taking place in rural population noted above is the reduction in the population of small villages and farm settlements. Lewis points out that accompanying the economic process is the reduction in the proportion of people living in towns with less than 2,000 inhabitants from 80 percent to 30 percent or less and adds that: "It is quite useless to expect real incomes per head to grow without reducing rural population below the 80 percent level for the simple reason that towns of 2,000 inhabitants or less do not permit the economies of scale to be enjoyed".<sup>1</sup> Lewis further points out that "the speed with which urbanization occurs is a problem in all countries where economic growth is just beginning". In such countries population is usually growing fairly rapidly resulting in rural unemployment and a drift of people into the towns in search of jobs.

This rural to urban migration is a well established phenomenon, but evidently two requirements must be satisfied before this is realized. In the first place the country must have progressed from a totally agrarian society into the second stage of development which according to Heady is characterized by income elasticities of demand having differential magnitudes for all sectors. "Resources are drawn from capital

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<sup>1</sup>Arthur Lewis, The Theory of Economic Growth (5th ed.; London: G. Allen & Unwin Ltd., 1961), pp. 337-338.





accumulation and population increase, in sectors with lowest income elasticities to those with highest elasticities, although some additions to capital and labour remain in the former."<sup>1</sup> The second important requirement is that resources must be mobile.

Heady's two criteria set out in the foregoing paragraph unfortunately are not always met, sometimes only to a limited degree, at other times there are impediments to mobility and resource transfers. The causes of such impediments or lags in economic growth are as many as they are diverse, some of these causes are inherent in the socio-psychological, cultural and economic factors. One theory which tries to explain the influence of cultural factors as impediments to economic growth was put forward by Boeke in his "dualistic theory". This is defined as:

the clasing of an imported social system with an indigenous social system of another style. Most frequently the imported social system is high capitalism. But it may be socialism, or communism just as well, or a blending of them.<sup>2</sup>

Boeke's theory was based on his observation of the Indonesian society and applies primarily to the clash of Western culture on Eastern culture. Nevertheless, although many of his conclusions and inferences are not supported by other workers in this field, the principle of dualism is useful and may be seen to operate in many societies. Higgins expresses the view that "there can be no question about the phenomenon of dualism, it is one of the distinguishing features of underdeveloped countries".<sup>3</sup> Some of the chief characteristics of the system Higgins

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<sup>1</sup>Heady, Agricultural Policy Under Economic Development, p. 91.

<sup>2</sup>Reference made by Benjamin Higgins, Economic Development, (New York: W.W. Norton & Co. Inc., 1959), Ch. 12.

<sup>3</sup>Ibid. p. 281.





points to are that in such areas

virtually all of them have too clearly differentiated sectors: one confined mainly to peasant agriculture and handicrafts or very small industry, and the traditional activities associated with them; the other consisting of plantations, mines, petroleum fields and refineries, large scale industries, and the transportation and trading activities associated with these operations. Levels of technique, productivity, and income are low in the first sector and high in the second.<sup>1</sup>

The principle of dualism, this clashing of two sets of values or cultures, is clearly evident in both developed and developing countries. In the former it may not be so much the conflict between an imported and indigenous cultures. It is instead the conflict between a highly organized capitalist urban culture on a rural society oriented to agricultural fundamentalism or small isolated sectors of rural peasantry and closed community groups. In both Canada and the United States, Higgins points out, there are "areas in which techniques lag behind those of the most advanced sectors in which standards of economic and social welfare are correspondingly low."<sup>2</sup>

Theories of economic growth are not concerned solely with underdeveloped countries. In many instances they are formulated on the observations of economic processes in developed societies. In these countries it is not a case of stagnation of the whole economy, but only of certain sectors. In other words, the problem is not a general one, but a particular one. It is for this reason, perhaps, that until recently not much attention was given to underdeveloped areas and to poverty in the more affluent western societies. But there were other reasons. A dominant influence was the prevailing public attitude towards poverty. This

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<sup>1</sup>Ibid., p. 281.

<sup>2</sup>Ibid., p. 285.





prevailing attitude up to the 1930s is summed up quite well by Schultz:

Poverty--the state of being in need--is an acceptable state socially; the poor have always been with us (and, of course, respectable, for it is not an unknown academic state!). It is neglected in research about agriculture, since thinking on this issue is usually not received with favour; and it is well conceived in the formulation of agricultural policy and misused in seeking public support for agricultural programs. Poverty within agriculture is acceptable, for it is looked upon as natural. It is natural

- (1) because poor farmers gravitate to poor land, and there is much poor land in the United States;
- (2) because many farm people prefer to stay poor rather than make adequate effort to improve their lot;
- (3) because in farming, although people may be poor in dollars, they are nevertheless rich in those valuable appurtenances that go with being close to nature and with the free independent living of farm life; and
- (4) because the Negro and the Mexican, of whom there are many in agriculture, are naturally poor.

So runs the mythology and folklore<sup>1</sup> of our day, making poverty not only acceptable but necessary.

Many of these ideas, however, were dissipated by the depression of the 1930s. Emerging out of the general economic chaos was the realization that poverty was not a chosen way of life, neither was it the result of individual indolence or apathy. Many of the causes of the inequality were ingrained in the existing social and economic system.

In explaining the causes of these lags in economic growth, Schultz pointed out that: "these gaps consisting of differences in levels of living are basically consequences of the way in which the economy of the United States has developed and not primarily the result of an original difference in the cultural values or capabilities of the people themselves."<sup>2</sup>

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<sup>1</sup>T.W. Schultz, "Reflections on Poverty in Agriculture", Journal of Political Economy, LVIII, No. 1, (February, 1950), pp. 1-2.

<sup>2</sup>loc. cit.





Schultz here places little emphasis on influences of cultural and social values but bases his thesis particularly on location theory. Many writers, however, emphasize the need for inclusion of social and psychological variables when considering economic theory of growth and lags in the economy. Back considers that "economists often assume that the choice in occupation, or production and consumption decisions of people are directly related to the money interest. But money may not be the main moving force in explaining the low income situation".<sup>1</sup>

According to Back the decision-making process always involves values and motives.<sup>2</sup> This often involves on the one hand the use of limited knowledge and the application of feeling or emotion. On the other hand some decisions are made with little or no "feeling or emotion". A third process involves combinations of both. This gives rise to the thesis that low-income farmers tend to use mainly the decision-making process which is based on a small application of knowledge and a large application of "feeling" or "emotion". In other words, low-income farmers lack the strong economic motives and knowledge needed to use careful thinking in arriving at their economic choices. In the absence of proper knowledge and by the application of individual values and motives, or other cultural influences, barriers can be created to the movement of these people to better income opportunities. Similarly these factors can be barriers to developing better economic opportunities.

Galbraith puts forward a theory somewhat akin to Schultz' which is based on what he terms the settlement pattern of the agricultural

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<sup>1</sup>W.B. Back, "Perpetuation of Low Farm Income Areas", Farm Policy Forum, Spring, 1956, p. 19.

<sup>2</sup>Ibid., p. 24.





community in question. In this hypothesis Galbraith postulates that the early settlement pattern, the limitations placed on the farm size "did much to determine the eventual form and scale of operations".<sup>1</sup> It also determined the density of rural population and the nature of the rural communities. Another point which he stresses is that very few concessions were made to the physical characteristics of the land. In the process of settlement all land was treated alike and settlers on poor soils received the same size holding as those on better soils. Under a flexible system the disadvantages of poor soils can be compensated for by increasing the acreage operated. Unfortunately the early policy was quite rigid and did not easily encourage readjustments until the problem had well developed.

Schultz finds in Galbraith support for his location theory. According to the latter, "in many other areas what had been a satisfactory settlement pattern was made obsolete by improved transportation and increased regional specialization or by changing technology".<sup>2</sup>

Johnson provides another explanation for the existence of pockets of poverty. In his analysis of the problem, emphasis is placed on the imperfections of the resource market, particularly labour. Johnson subscribes to the view that:

In economics, and especially the economics of agriculture, we have failed to devote enough attention to the analysis of labour. Even though labour is the most important resource of our economy, we know much less about it than we do the other resources. We have always shown more interest in the commodity markets than we have the factor or resource markets.<sup>3</sup>

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<sup>1</sup>John K. Galbraith, "Inequality in Agriculture - Problem and Program", J.J. Morrison Memorial Lecture delivered at Ontario Agricultural College, Guelph, Ontario, November 16, 1956. Distributed by Dept. of Agricultural Economics, Ontario Agricultural College.

<sup>2</sup>Ibid.

<sup>3</sup>D. Gale Johnson, "Functioning of the Labour Market", Journal of Farm Economics, Vol. XXXIII, No. 4, (Nov., 1951), p. 722.





Johnson therefore looks within the industry for the causal factors whereas Schultz regards these as exogenous. To Johnson there are imperfections in the agricultural market resulting in the immobility of human resources. Contributing to these imperfections, he lists lack of knowledge of alternative opportunities, lack of alternative skills or training and other characteristics. In his view, therefore, measures should be taken to remove these impediments and so bring about a "desirable shift" of manpower. He introduces an interesting definition of "desirable shift". Desirable shift occurs if two requirements are met. "Such a shift must result in an increase in the marginal productivity and real earnings of the person making the shift". In another sense "a desirable shift of manpower is one that results in an increase of the net national product. Furthermore, a desirable shift is one that is consistent with the freedom of the individual to choose as he sees fit".<sup>1</sup>

Although much stress is placed on the shifting of manpower, Johnson is certainly conscious that there must be accompanying shifts in other resources if adequate gains are to be achieved. "It is impossible to achieve the best use of farm labour without at the same time achieving more adequate use of other farm resources".<sup>2</sup>

The need to recognize mobility as only a single phase in a general policy of resource adjustment is also stressed by Heady. He draws attention to the fact that the post war period labour has declined about 33 percent, but simultaneously output has increased 38 percent, so that "some fairly marked reductions in the labor force have taken place

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<sup>1</sup>Ibid., p. 723

<sup>2</sup>Ibid., p. 724





without causing agricultural output to decline".<sup>1</sup> The two significant implications here are, first, the presence of disguised unemployment in agriculture which means that small reductions in the number of workers does not bring about shortage of labour; secondly, that even larger reductions in labour do not reduce output, in fact technology replaces labour and output is increased. In the absence of elastic demand for agricultural commodities prices are depressed, and the relative income situations remain unimproved. What Heady suggests, therefore, is that "out migration or farm abandonment must be accompanied by farm consolidation which will bring about economies of scale".<sup>2</sup>

There is certainly no basic disagreement among the foregoing authors as to the desirability of shifts in manpower. Fuller, however, questions this solution on the basis that the maximization goal of workers is complex and decisions to change jobs are "restrained and conditioned by a generally prevailing anxiety about change, which is to say that certainty in the immediate present has more value than most model builders are inclined to give it".<sup>3</sup> The core of Fuller's analysis is summed up in the following paragraph:

The essence of democratic society is not maximum or equal income but equal and unrestrained opportunity to be productive. Identifiable pockets of poverty may be attributable to disabilities in an area economy or to disabilities in the population or to a combination of the two. Out-migration from such a pocket may relieve the burden upon an under-par local economy, but it is likely only to transfer elsewhere the disabilities of its migrating populace.

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<sup>1</sup>Earl O. Heady, Agricultural Adjustment Problems in a Growing Economy (Iowa: The Iowa State College Press, 1958), p. 146.

<sup>2</sup>Ibid.

<sup>3</sup>Varden Fuller, "Factors Influencing Farm Labour Mobility", Labor Mobility and Population in Agriculture, (Iowa: Iowa State University Press, 1961), p. 34.





Disabilities associated with poor education, poor physical or mental health or discrimination should presumably be as solvable in place as elsewhere. Such problems are not actually solved by getting them out of sight or through attenuation elsewhere regardless of whatever asepsis that may occur in the income statistics of the places of evacuation.<sup>1</sup>

This analysis of Fuller brings attention to personal values and the right of the individual to decide what is best for himself. Fuller is not opposed to the usefulness of mobility. He, however, emphasizes that "a distinction be recognised between the development of capacity to be productive and therefore mobile as against the more superficial notion of motivating the movement of disadvantaged people to some place where it is assumed they will be better off".<sup>2</sup> He supports such policies as primary and secondary education and job information in farm areas as proposed by Johnson but emphasises the case for the individual. As he says: "let us have the educational, health and manpower policies that will result in capable, self-dependent people and leave the question of where and at what they will work to them".<sup>3</sup>

### Research Review

According to Selltiz:

Scientific research is a community enterprise, even though single studies are frequently carried out by individual investigators working alone. Each study rests on earlier ones and provides a basis for future ones. The more links that can be established between a given study and other studies or a body of theory, the greater the probable contribution.<sup>4</sup>

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid. p. 35.

<sup>3</sup>Ibid.

<sup>4</sup>Selltiz, op. cit., p. 44.





In this section some of the past research findings in mobility are reviewed. Consideration is given primarily to those variables selected for the present study. Nevertheless some discussion is made of the findings of some other related variables from these other studies.

### Age

In nearly all the studies reviewed on transfer of labour or mobility, age is considered an important variable.

Olson in his study found that "job mobility occurred more frequently among the younger population than among the older population".<sup>1</sup> Of those who were mobile, 63 percent were in the 31 to 42 years of age group compared with only 29 percent in the 55 to 65 age group. Of the migrants out of agriculture he found that "movement out of agriculture occurred largely among younger people". Over 50 percent left farming between the ages of 31 to 42 years, whereas six percent left between 55 and 65 years of age.

Baumgartner in his study of potential mobility found that "age was important among the inverse relationships", and there was "a perceptible decline in potential mobility with increasing age".<sup>2</sup>

Skrabanek and Bowles found that migration during the 1940s from rural areas in Texas was greatest among those aged 15 to 19 years.<sup>3</sup>

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<sup>1</sup>Philip G. Olson, "Job Mobility and Migration", (Research Bull. No. 708, Agricultural Experiment Station, Purdue University, Lafayette, Indiana, November, 1960), p. 412.

<sup>2</sup>H.W. Baumgartner, "Potential Mobility in Agriculture: Some Reasons for the Existence of the Labour-Transfer Problem", Journal of Farm Economics, XLVII, No. 1, (February, 1965), p. 79.

<sup>3</sup>R.L. Shrabanek and Gladys K. Bowles, "Migration of the Texas Farm Population", (Bull. No. 847, Texas Agricultural Experiment Station, February, 1957), p. 6.





The net rate of out-migration of this group was over 68 percent. The second largest out-migration occurred among people between the ages of 10 and 14 at the beginning of the decade followed by persons between 20 and 24. This study was of interest as it was undertaken in the state of Texas which had experienced a consistently high rate of migration up until 1955. On the whole migration from the southern States has been very high. The net rate of migration from farms in Texas during the last decade was only slightly higher (45.6 percent) than the West South Central Division (44.0 percent) but considerably higher than in the nation (30.9 percent).

Abell in a Canadian study of two rural areas found that all children of 15 years or younger were living at home and very few of those 16 to 20 years of age had left. Among those of successively older age categories (21 to 24 years and 25 years or older) an increasingly large proportion of the children had left the home. Out-migration among the males 16 and over was in the ratio of one male living at home to two away. In one area the ratio for females was one to three, but in the second area it was one to ten. In this area also "there was not one girl of 21 years of age or older living on the home farm".<sup>1</sup>

### Education

Olson found that a significant difference in educational levels existed between the migrant and non-migrant populations. According to him, "a larger proportion of the migrating population (26%) than the non-migrants (16%) had some college education, whereas a larger

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<sup>1</sup>Helen C. Abell, "Some Reasons for the Persistence of Small Farms", The Economic Analyst, Vol. XXVI, (October, 1956), p. 117.





proportion of the non-migrant population (46%) than of the migrant population (37%) had less than 12 years of schooling".<sup>1</sup>

Alleger showed that "educational levels of fathers were found to be directly related to out-country migration of sons". Education, he also concluded, "appeared to be the principal avenue for vertical mobility and for maximizing the innate capacities of the recipients".<sup>2</sup>

Abell did not examine the direct relationship between education and mobility as such, but examined the parental attitudes to education. Abell reported that most farmers (60 percent) wanted their sons to be farmers and felt that "eight or fewer grades of schooling were all that were necessary for a man to be a successful farmer".<sup>3</sup>

#### Knowledge of Alternative Opportunities, Special Skills and Training

Olson found that "less mobility occurred in occupations requiring special skills and capital than those requiring little or no skills or capital".<sup>4</sup> Since farmers as a group possess some levels of skill and investment in land, livestock and machinery, it appears that these factors present impediments to farm mobility. Olson suggests that "explanations of mobility into and out of agriculture must be studied in terms of the inelastic degree of skill and the quantity of capital possessed by individual farmers".

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<sup>1</sup>Olson, op. cit., p. 15.

<sup>2</sup>Daniel E. Alleger, "Rural Areas in Transition: A Study of the Impact of Off-Farm Employment in a Low-Income Farm Area of Florida", (Bull. 671, Agricultural Experiment Station, University of Florida, Gainesville, Florida, May, 1964).

<sup>3</sup>Abell, loc. cit.

<sup>4</sup>Olson, op. cit., p. 10





Dyck had in his study of farm families several who said that in their opinion, they lacked, among other factors, training and experience for other work.<sup>1</sup>

Baumgartner observed that among background factors associated positively with potential mobility "were past actual mobility and non-farm work experience, particularly in skilled occupations".<sup>2</sup>

Bivens reported that of 203 families interviewed in his study, eight percent indicated that they had considered making a change in occupation, but at the time of the survey none had made this adjustment. The reasons provided for this immobility were family ties and lack of training for non-farm work. There were other reasons suggested, such as "waiting to work out arrangements for transferring the family farm, hopefulness about future crops and income prospects, health and social security considerations".<sup>3</sup> An interesting area researched by Bivens asked farmers "to estimate the income they would need to expect to consider moving 300 miles away". The responses showed that the amounts desired increased with distance moved. Income would have to be 1.5 to 2.7 times their present farm income for these farmers to consider non-farm employment.

#### Social Participation and Attitudes

The factors considered here are mainly social-psychological.

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<sup>1</sup>D. Dyck, "Relocation Adjustments of 95 New Brunswick Farm Families, 1956-60", The Economic Annalist, Vol. XXXII, No. 2, (August, 1962), p. 87.

<sup>2</sup>Baumgartner, loc. cit.

<sup>3</sup>Gordon G. Bivens, "Why Farm Families Do or Don't Leave Farming", Iowa Farm Science - Iowa State University of Science & Technology, Vol. XV, No. 3, (September, 1960), pp. 3-4.





They are concerned in some respect with the motivations and satisfactions which people gain from farming or non-farming occupations. It is suggested that farmers who are closely involved in community activities, (i.e., those who participate in community organizations and group activities), would be more attached to the community and hence less mobile. A closely related factor would be personal attitudes towards farm and non-farm occupation and living. Those persons having favourable attitudes to family and living on the farms will also feel less strongly to moving out. An important factor contributing to these two attitudes would be levels of living. This is an imprecise measure but has found its way into the favourite "tool kit" of social workers. It is essentially a measure of cultural and economic factors and the observed data point to the conclusion that farmers with a low level of living are more likely to seek improved conditions out of farming.

Olson employed the Hay technique which assigns numerical values to community participation as follows: membership (1), occasional attendance (2), regular attendance (3), committee member (4), office (5).<sup>1</sup> Using this scale Olson found no difference between the participation scores received by migrants and non-migrants.

The other two measures used by Olson are interesting although they are not employed in this study. The first, attitudes toward the community which were determined by a set of questions designed to reveal people's feelings toward the community's progressiveness, inhabitants and facilities. The second was kinship ties (or the number of relatives who were not immediate family members but were considered "close relatives"). In the former case a great proportion of migrants had low scores (unfavourable

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<sup>1</sup>Olson, op. cit., p. 16.





attitudes); hence the conclusion was that high scores or a favourable attitude toward the community was an impediment to migration. In the latter case it was found that "kinship ties apparently tend to impede migration".<sup>1</sup>

Gerschwind and Ruttan found no difference in community participation between the migrant and the non-migrant groups.<sup>2</sup> On organization participation a direct relation was found between organization participation and level of income with low income farmers having low participation scores. This means that there was a higher rate of mobility among farmers with low participation scores.

Baumgartner indicated that potential mobility declined "with preference for farming and to rise with an expression of willingness to leave the farm".<sup>3</sup> With respect to attitudes toward non-farm occupations, potential mobility increased with present consideration of non-farm work and with favourable attitude toward urban opportunities.

Abell, after careful examination of the conditions of farming in two rural areas, noted that "in spite of the small acreage of their farms, the low receipts from farm occupations and the fact that few of the men could be considered old, none of the Steinbach farm operators and only three of those in Basejour planned to abandon farming for a different occupation".<sup>4</sup> Abell also found strong family and interpersonal ties. The

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<sup>1</sup>Olson, ibid.

<sup>2</sup>R.D. Gerschwind and V.W. Ruttan, "Job Mobility and Migration", (Res. Bull. No. 730, Agricultural Experiment Station, Purdue University, Lafayette, Indiana, September, 1961), pp. 14-15.

<sup>3</sup>Baumgartner, loc. cit.

<sup>4</sup>Abell, op. cit., p.116.



majority of the farmers interviewed said they preferred living in their own community rather than in any other. Some of the reasons given were: "I know everybody" or "these are my people". Finally, Abell found that the average level of living score was 15.8, which is slightly below average scores obtained in previous studies in other parts of Western Canada. Questioned further, the majority of farmers expressed satisfaction with their levels of living.

### Investment

Research reviewed points to a very definite relationship between investment and mobility. There is a direct relationship between levels of investment and incomes. This of course does not always hold true. High income is related to low rates of mobility and out-migration.

Olson found no relationship between the amount invested in machinery and livestock and mobility out of agriculture.<sup>1</sup> He found, however, an increase relationship between investment in land and mobility. "The farm operator who owned farmland moved out of agriculture less readily than the tenant". Also, "mobility out of agriculture has been most prevalent among operators of smaller farms (measured by gross sales) and among tenants".

Baumgartner found what he considered "an unexpected outcome" in his association analysis. There was no statistically significant association between any of the six economic variables examined and potential mobility.<sup>2</sup> The economic variables he considered were gross income,

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<sup>1</sup>Olson, op. cit., p. 13.

<sup>2</sup>Baumgartner, loc. cit.





net income, net worth, annual net growth and size of enterprise as indicated by the number of acres operated and livestock units.

Dyck observed that high initial capital investment operated against young people starting in farming: "parents do not have the capital to get their sons started in farming" and "the cost of machinery and other items needed to start farming is too high".<sup>1</sup>

#### Family Income

This factor is regarded in nearly all the studies reviewed as the one contributing most to the transfer of labour of farm families from one area to another, or to occupational mobility.

Olson found that mobility out of agriculture has been most prevalent among farmers and tenants with low gross income. He also pointed out that those farmers leaving farming "were seeking economic betterment since a greater proportion of the migrant farmers than of the non-migrant had additional sources of income".<sup>2</sup>

Dyck indicated that most farmers interviewed in Prince Edward Island "thought that the opportunities for higher and more certain income in non-farm work was the major factor in the movement of rural youth out of their communities".<sup>3</sup>

The Saskatchewan Royal Commission on Agriculture and Rural Life

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<sup>1</sup>D. Dyck, "Farmers' Views on Rural Life in Prince Edward Island", The Economic Annalist, Vol. XXXI, No. 6, (December, 1961), p. 140.

<sup>2</sup>Olson, op. cit., p. 17.

<sup>3</sup>D. Dyck, "Farmers' Views on Rural Life in Prince Edward Island (cont'd)" The Economic Annalist, Vol. XXXII, No. 1, (February, 1962), p. 7.



examined how the influence of low incomes operated through social isolation. This was more important among the low income farmers than higher income farmers, hence, the former group tended to be more migratory.

"Similarly, low income farmers were more interested in moving to obtain city conveniences than higher income farmers probably because those with higher incomes had already acquired many amenities on the farm".<sup>1</sup>

Shrabanek and Bowles found that the migration rate from medium income and high income farming areas was 28.0 percent, while with low income farming areas the rate was 33.8 percent.<sup>2</sup> Within the low income farming areas the rate increased from 27.8 percent for moderate low income areas to 36.9 percent for serious low income areas.

#### CONCEPTUAL FRAMEWORK

The foregoing theoretical and research review provided the basis for the conceptual framework from which much of this study was formulated.

The historical shifts of human resources from rural to urban centres demonstrate the desire on the part of the people in low income rural areas to seek improved social and economic standards. This hypothesis finds support from the many studies which have been undertaken particularly during the past two decades to determine, among other things, the characteristics and motives of migrants. Outstanding among these are the social and economic motives--the desire to obtain higher

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<sup>1</sup>Royal Commission on Agriculture and Rural Life, Movement of Farm People, (Saskatchewan: Queen's Printer, Report No. 7, 1956), p. 115.

<sup>2</sup>Shrabanek and Bowles, loc. cit.





incomes, better jobs, improved conditions and greater opportunities for the individual and his family and to acquire a higher social status.

The process of moving can be thought of as involving two stages. The first is making a decision to move or not to move. The second is the actual physical process of moving. Before a decision can be made there must be what the sociologists call a "felt need". Once this "felt need" is established there ensues the decision-making process. This involves the use of knowledge and often the application of feeling or emotion in changing behaviour. Some decisions are made with limited knowledge of the circumstances and with considerable feeling or emotion. On the other hand very little or no feeling or emotion and considerable knowledge are used in making other decisions.<sup>1</sup>

Knowledge is derived from the social environment and also the individual inherits his inward inclination for survival, security and change from his immediate and other environment.<sup>2</sup> All these processes involve economic, social-psychological and personal considerations. These can be modified but they cannot be adjusted to any given situation automatically because of the interaction and often one acts counter to another.

The "felt need" may be induced by the individual's awareness of better social and economic opportunities outside of his immediate environment. He is exposed to greater opportunities for jobs, higher incomes and improved social conditions. But these "pull forces" are counteracted by opposite forces. Moving from the farm to a town or city job involves a subjective and objective cost. The former involves

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<sup>1</sup>Back, op. cit.

<sup>2</sup>Ibid.





"psychic income" which according to Haythorne involves values that cannot be adequately expressed in financial terms. "People build up attachments to farming and to their present locations, and these tend to increase with time. Moreover, additions and improvements made to farm property may be numerous. Again these cannot always be expressed satisfactorily in monetary terms, and besides, they may not have as much value to a potential buyer as to the present owner".<sup>1</sup> The objective costs include the actual costs involved in the transfer, mainly transportation and resettlement. There is also the cost to the individual if he has to sacrifice several days' work or has to travel long distances for the necessary information. Other economic considerations include the actual costs of living in the city as compared to living on the farm.

The relative decline in importance of agriculture in the economy has contributed to the disparity between farm and non-farm incomes, Johnson pointed out that the 30 percent out-migration from agriculture in the United States during the first 17 years after the war has apparently been required to stabilize the relative returns to agriculture.<sup>2</sup> He suggests that a greater rate of migration may be necessary in the following years if the income gap is to be narrowed. The fact that a more rapid rate of emigration from low-income areas has not taken place over the years suggests that money income in itself is not the most important thing to all farm families. Other factors of a social-psychological or personal nature may be more important. The cliché that "man is a social animal" has application here.

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<sup>1</sup>George V. Haythorne, Labour in Canadian Agriculture (Harvard: Cambridge University Press, 1960), p. 98.

<sup>2</sup>D. Gale Johnson, "Labour Mobility and Agricultural Adjustment", Agricultural Adjustment Problems in a Growing Economy (Iowa: Iowa State College Press, 1958), p. 168.





The rural society still remains largely a closed family oriented Gemeinschaft. Individuals grow up with strong family and community ties. The very nature of farming which offers the family head the unique experience of bringing-up a family and at the same time organizing and operating a farm business has a strong appeal. The independence of farming and the closeness to nature are considerations which set farming as an occupation apart from most other occupations and make farming a way of life. On the other hand farming involves long hours of hard labour. It is subject to the uncertainties of weather conditions and fluctuating prices. All these factors contribute to make a permanent city job, and life in the city seem far more attractive to many rural families. Therein lies the conflict. There is no guarantee of success out of farming and this in itself presents an obstacle to mobility. The city projects a relatively unknown entity, friendless and unfamiliar and this must be weighed against the security and familiarity of the farm and rural community.

The economic and non-economic considerations all have a direct relationship to personal characteristics of the individual. Many studies have shown that low-income farmers have generally low levels of education and very few alternative skills or training. Low levels of education act both as a direct and indirect handicap. In discussing the effect of education Haythorne take the view that:

In this case the influences are harder to isolate because they are apt to be combined with others that affect the total social and economic environment. Inadequate education is frequently linked in a vicious circle with inadequate income, nutrition and initiative. When incomes are low and schooling is poor, people usually have little desire to move because they have not been prepared for anything else. Moreover, there is little incentive or capacity to<sup>1</sup> reorganize their farming operations to make them more productive.<sup>1</sup>

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<sup>1</sup> Haythorne, op. cit., p. 60.





Success in farming is greater among individuals with higher levels of education and farming skills. Individuals with non-farm experience and non-farm job skills are more inclined to seek employment out of farming. This inclination will also be influenced by the individual's knowledge of alternative job opportunities. In areas where additional facilities and off-farm employment opportunities are limited or absent these may be regarded as barriers to social and economic mobility.

Age stands out as one of the most important single factors influencing the decision-making process of an individual. Younger men who are unsuccessful in farming have more opportunities of gaining employment elsewhere than older men. Furthermore, they have less identification with, or attachments to, the rural community. They are, consequently, subjected to less restraints. Older farmers have either more time to accumulate capital or have more experience and stronger identification with farming and the community. Accordingly, they tend to be less mobile. Heady found that farmers' attitudes towards farming as a career is also strongly influenced by age.<sup>1</sup> Younger farm families, he found, were more concerned with improving their economic status, whereas older families were more concerned with making farming a way of life.

There are other forces involved in the decision-making process. As industrialization and urbanization continue, greater opportunities for young men and women are created that were not available to their parents. Greater emphasis is placed on education and training for jobs which have been created by economic growth. Simultaneously, living conditions in urban centres continue to improve rapidly. On the farms, particularly the

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<sup>1</sup>Earl O. Heady, W.B. Back and G.A. Paterson, "Interdependence Between the Farm Business and the Farm Household with Implications in Economic Efficiency" (Iowa: Agricultural Experiment Station - Iowa State College, Research Bull. 398, June 1953).





small and low-income farms, these improvements take place more slowly. Many farm families continue to live in one room log houses without running water, flush toilet, electricity and other common facilities. Young people acquire information or are exposed to better living conditions through various media. They are drawn to the more modern living conditions and opportunities in the cities.

These are some of the considerations involved in making a decision to migrate. Clearly it involves considerable knowledge. Even with proper information there is no guarantee that a decision once made is correct for the individual or society. Freedom of movement is still a much vaunted ideal of our democratic society, but often the individual's decision to remain in a low productive area may not be in the best interest of society as a whole. Conversely, the movement to urban slum areas may also be less than in the best interest of either party. The fact that many farmers remain in a low-income area suggests that they lack the information and knowledge to make a decision or they are unable to overcome the many barriers or impediments.

The imperfection of the labour market is stressed in economic theory by such economists as Johnson and Heady. The cost of information to the rural labour force, the inadequacy of knowledge of job opportunities and the differential ability of workers are all contributing factors. In sociology theories have been developed relating immobility to impediments such as family and community attachments, social status and participation in the community. Clearly these economic and social factors cannot be treated separately, since they are interwoven and interact together to influence the decision-making process of individuals.



#### IV. FACTORS AFFECTING OCCUPATIONAL MOBILITY

All of the variables which were selected for the study were assumed to have either a direct or indirect influence on the attitude of farm operators towards occupational mobility. Age and education were found to be the most important variables influencing the decision of these operators to remain in farming or to seek new occupations. The economic factors, low farm income, small size of farm, evidently induced dissatisfaction with farming and brought about the desire for change and improvements. This desire for change however could not be fulfilled in many cases because several personal, social-psychological, and economic factors presented barriers. The findings concerning these variables are discussed in this section under four main heads, (1) Personal: age, education; (2) Occupational: alternative skills and job training, knowledge of job opportunities; (3) Social-psychological: attitude towards farming, levels of living, and social participation; (4) Economic factors: investment in the farm operations, equity, and farm income.

##### Personal Factors

##### Age

For farm operators in the low-income agricultural area age was perhaps the most important factor influencing the decision-making process toward occupational mobility. It assumed greater importance because of the relationship between the household and the farm firm. Decisions related to the farm business and the household are influenced by the family life cycle and, in particular, by the age of the head of the household.

Other studies on mobility have found that mobility rate differentials





exist at various age levels. Examination of the data gathered in this study concur with this conclusion. Few farm operators were found in the Bonnyville District either under 25 years of age or 65 years and over (Table 6). The majority of operators were in the productive age group 25 to 64 years and it was found useful to examine the relative proportions of operators in different classes of the productive years. The largest group of farm operators was in the middle age group 33 to 44 years. Thereafter the number of operators in the older age groups occurred less frequently.

TABLE 6

AGE DISTRIBUTION OF FARM OPERATORS SURVEYED,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

<u>Age of Farm Operators</u>	<u>Farm Operators Reporting</u>	
	<u>Number</u>	<u>Percent</u>
Under 25 years	5	3.5
25 - 34	31	21.5
35 - 44	44	30.6
45 - 54	36	25.0
55 - 64	24	16.6
65 years and over	4	2.8
Total	144	100.0

Few farm operators remaining on the farms were 65 years old or over, which indicates that most older farmers had retired or migrated from the area. Examination of the data collected on migrants from the farms confirmed the conclusion that older farmers had retired and had taken up residence in neighbouring towns and a few had migrated to the city. The movement of this group of farmers did not represent occupational mobility, since few of these farmers accepted off-farm employment. It was important, however, since it contributed to a reduction of unproductive labour on the



farms. Furthermore, it permitted younger men, in most cases the sons of these farmers, to take over the farms. In other cases the opportunity was provided for farm consolidation which unfortunately did not occur as rapidly as the rate of off-farm migration. This slow rate of consolidation was evident from the number of farmsteads which were abandoned and the farmlands left idle and unattended. Farmers in the productive age group, 25 to 64 years of age, were divided in their attitudes towards remaining in farming or moving to new occupations. Positive or negative attitude depended on the level of satisfaction which the operator and his family had achieved in farming. This in turn was dependent on other factors such as farm income, social participation, levels of living and education.

Most older farmers before the age of retirement felt that they were unable to migrate. Many of them expressed some despair or pessimism. They attributed their failure in farming and inability to migrate to such reasons as lack of education and training for other employment and being too old to undertake training which they considered was for younger people. It was this group of farmers more than the younger group that clung to the security which living on the farm offered. There was also a stronger attachment to the community among these farmers. They reminisced in glowing terms of their early pioneering days, they had moved into the area when "there were no roads, only bush", and had established farms and had seen small towns grow up. These older people knew all the neighbours and had developed strong mutual ties. Some of them expected to sell their farms eventually and retire to a small town. The most frequently named town was St. Paul. Only a few considered retiring to the city of Edmonton.





An important consideration which arises with aging farm families is the types of agreement or means of transferring the farm to the younger members of the family. The process of farm transfer is never easy, particularly in families in which the head of the household is still quite active and has developed strong patterns of behaviour in the farm operations and farm living. No general institutionalized pattern of transfer was observed in this study. In the majority of families the father was still able to operate the farm when the last child was married or had left the farm. A father-son partnership was arranged in a few cases or the father transferred ownership to one of his children. Most frequently, however, the sons moved to another farm or migrated from the farm to seek employment in urban centres.

### Education

Education was found to be one of the most important variables influencing occupational mobility decisions. The earning capacity of an individual is often determined by his level of education. Evidently a low level of education not only limited the individual's earning capacity but also the extent of his social and economic participation.

In trying to assess the circumstances of education in Bonnyville District, levels of education of the respondents were expressed in terms of the number of years of formal schooling completed. The responses showed that one operator in every six had four years or less of formal schooling, two out of five had completed Grade VII or VIII and less than one in ten had completed Grade XI or XII (Table 7). None of these farm operators had attended university but five had two years of training at an agricultural school. The modal number of years completed in school





was eight.

TABLE 7

NUMBER OF YEARS OF FORMAL SCHOOLING COMPLETED BY OPERATOR  
AND WIFE, BONNYVILLE MUNICIPAL DISTRICT, 1965

Years of formal schooling	Operator		Wife	
	Number	Percent	Number	Percent
Less than 5	24	16.7	13	10.8
5 - 6	21	14.6	12	10.0
7 - 8	55	38.2	43	35.8
9 - 10	31	21.5	30	25.0
11 - 12	13	9.0	21	17.6
University	0	0.0	1	0.8
Total	144	100.0	120	100.0

The wives of farm operators had slightly more years of formal education than their husbands. The sample showed that nearly one in ten, or 11 percent, had four years or less of formal schooling. There were 43 or nearly 36 percent who had completed Grade VII or VIII and 18 percent had completed Grade XI or High School. One individual from this sample had two years of University training.

It was evident from the data that a higher percentage of the older farm operators, above 40, had fewer years of formal education than the younger people. This could be explained by the fact that many were first generation immigrants who had few or no years of education before migrating to Canada. Furthermore, until the 1940s education was provided only up to Grade VIII in most rural schools in Canada so that these older people did not have the opportunity for higher education.

While a low level of education was a serious impediment it was not the sole factor contributing to the immobility of farm families. There were many migrants with similar deficiencies who had overcome these





disadvantages. It seems, however, that groups of migrants with common ethnic origins had settled in small communities. Strong cultural ties combined with the disadvantages of low levels of education acted as impediments to their mobility.

### Occupational Factors

#### Alternative Skills and Job Training

A major factor determining the extent to which persons in low-income farm areas participate in the labour force is the possession of alternative skills and training. It is as important that those persons intent on entering non-farm occupations be trained and equipped for alternative jobs as it is to have information services available to them. A common view is that rural workers must undergo months of intensive training before they are capable of undertaking most urban jobs. This is not necessarily the case. There are many instances where such workers have demonstrated the ability to carry out new duties in a short space of time with brief on-the-job training. This has been the experience during periods of emergency and times of rapid economic growth such as the conditions existing in countries of the European Common Market today. Nevertheless, those workers who have alternative skills and training are technically and psychologically better equipped to move into non-farm occupations and to readjust themselves to new social and economic conditions.

Information obtained on farm operators' training in alternative activities shows that very few had any other training. Only seven farm operators, or 4.9 percent, had any formal technical training. Of these,



five had one or two years at an agricultural school and two at a technical school. One respondent reported taking a correspondence course in electronics. There were 30 farm operators who reported training in other occupations. These were apprenticeships such as carpenters, bricklayers, metal workers, or plumbers. Wives had relatively more formal training than the men. Twenty housewives reported some form of training. Most of these involved some formal training such as hairdressing, stenography and nursing (Table 8).

TABLE 8

TYPE OF ADDITIONAL TRAINING REPORTED BY FARM OPERATORS AND WIVES,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Type of Training	Number
<u>Operator</u>	
Mechanic, repairman	7
Metal worker, plumber	6
Agriculture School	5
Electrician	3
Carpenter	2
Bricklayer, plasterer	2
Vocational, technical school	2
Other training	10
Total	37
<u>Wife</u>	
Nursing aides	6
Bookkeeper and cashier	3
Hairdresser, barber	2
Stenographer	2
Nurse	2
Other training	5
Total	20

A tentative conclusion is that although a number of farmers were engaged in off-farm employment, these were largely jobs requiring a certain





amount of skill or training. The lack of training was evidently a major handicap to farmers who would willingly leave farming for non-farming occupations. These workers could obtain these jobs only on a part-time basis. This was further supported by a number of farmers who said that they choose farming because they had no other training or because they only had training and experience for farming. Several of these operators indicated some willingness to undertake training.

#### Expected Returns from Non-Farm Employment

The returns that farm operators expected to obtain from non-farm employment were a major factor in their consideration of off-farm jobs. The data indicate that farm operators would be willing to accept only the jobs in which the returns were greater than those available on the farms. The income which farm operators considered would be adequate to induce them to leave farming ranged from \$200 to \$600 per month. The mean income expected according to these responses was \$390 with a modal expected income of \$400 per month. This suggested that farm operators expected a much higher income from non-farm employment than they were accustomed to from their farm operations. The problem, however, was that the monthly income expected for non-farm employment was in the range paid only to skilled workers and to a few categories of non-skilled occupations. Farm operators with little or no training would perhaps experience much difficulty in obtaining permanent non-farm employment with such remunerations. It was evident too that many of these operators were unfamiliar with living conditions in urban centres and might have over-estimated or under-estimated the costs of living in the city. Nevertheless, the expected return from a permanent non-farm job was an important item in making a decision to move into urban employment.





An important factor involved in the movement of families from rural to urban centres is the cost of transportation and relocation. Farm operators who indicated willingness to leave farming felt that they might require financial assistance depending on the distance they would have to move. The majority of these operators considered the major problem was selling the farm. If this was accomplished prior to moving, then the family could manage the costs of relocation. Few families, however, would consider leaving the farm without first making satisfactory arrangements for selling or renting it. There were 12 operators who said they would require financial assistance. This ranged from \$300 to \$2,000.

There was some evidence to suggest that those individuals with non-farm jobs in the Bonnyville District were less inhibited about migrating from the farms than those without such experience. In the process of part-time employment certain changes are induced in those families in terms of household characteristics which are termed the employment effects of industrialization or urbanization. Other characteristics referred to as the selectivity effects of industrialization or urbanization help to differentiate between the potential migrant and non-migrant groups. The consequence of this often is to bring about increased mobility.

#### Knowledge of Job Opportunities and Off-Farm Employment

In most agricultural regions information and advisory services have been provided to farmers by government as well as private agencies. Generally the emphasis has been on providing farmers with information about new varieties of crops, application of fertilizers and chemical sprays, new machinery and other information dealing with farm practices. On other matters related to the labour market little attention has been





given to providing farmers with such information; in fact, information on the labour market in most rural areas has been the most neglected.

Small farm operators who find that their farm incomes are inadequate to support their families in a satisfactory manner often seek part-time employment to supplement their low farm returns. The extent to which such farmers are engaged in part-time employment is dependent on whether such non-farm jobs are available within a particular area, the extent to which farmers are prepared for such jobs, and their awareness of these opportunities. There is a further consideration involved. When private and public agencies provide the services and information on employment opportunities, this incurs little or no cost to farmers. On the other hand, when they are forced to travel long distances or take several days off from their farm activities to obtain such information, a cost is incurred which is often prohibitive. It was important, therefore, to inquire into the imperfections of the labour market in a low-income or depressed farming area.

There were a number of considerations related to the labour market that were of interest to this study: (a) the extent to which farmers were engaged in off-farm employment; (b) the extent to which farmers were willing to offer their services for employment; (c) the extent to which off-farm jobs were available in the community; (d) farmers' knowledge of such job opportunities; (e) how interested farmers go about in search of such jobs; (f) the services available to provide information to the farmers on employment opportunities.

A high proportion of farm operators were engaged in off-farm, part-time employment in the Bonnyville District. During the two year period of 1963-64, there were 55 operators, or nearly two out of every





five, who were engaged in some type of off-farm employment. Of the 89 who did not have part-time work, there were 18 who reported that they wanted part-time employment but could not obtain any in the District. Those who were employed were in a variety of occupations (Table 9). The jobs most frequently reported were construction, road maintenance and carpentry. A few more were engaged in "bush work", and others as plumbers and metal workers. These jobs were undertaken for varying lengths of time, primarily during the long winter months when there was very little activity on the farms.

TABLE 9

TYPE OF PART-TIME WORK REPORTED BY FARM OPERATORS AND WIVES,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Type of Work	Number Reporting
<u>Operator</u>	
Construction and road maintenance	11
Carpenter and cabinet maker	6
Logger, lumberman, fisherman	4
Metal worker, plumber	4
Painter	3
Cook, butcher helper	2
Well driller, oilfield worker	2
Truck driver, driver-salesman	2
Contractor	2
Mechanic repairman	2
Storekeeper and businessman	2
Clerical worker	2
Other work	13
Total	55
<u>Wife</u>	
Housekeeper, domestic servant	2
Nurse	2
Variety of other jobs	14
Total	18

Farm operators in the Bonnyville District had very little knowledge





of alternative job opportunities. This was partly due to lack of interest in off-farm employment but primarily to the absence of any job producing activities. Most operators considered it possible to obtain a few days of part-time jobs on neighbouring farms during the busy summer weeks. Less than one-third of the respondents were of the opinion that it would be possible to obtain some type of part-time work within a 20 mile radius. About one in every five persons referred to the neighbouring small towns of Bonnyville and St. Paul, 20 to 40 miles away. Nearly 50 percent reported that they did not know of any part-time work in the community and were of the opinion that a person would have to travel 80 miles or more to the nearest city, Edmonton, for such employment.

The responses on full-time employment suggested such opportunities occurred much less frequently and longer distances had to be travelled to obtain such employment. One person in ten considered it possible to obtain full-time employment in the community within a 20 mile radius. About 8 percent said that there were such jobs available within a 20 to 40 mile radius in the neighbouring small towns of Bonnyville and St. Paul. Eighty-one percent, however, reported that they did not know of any full-time employment opportunities in the community and were of the opinion that a person would have to travel more than 80 miles away or to the nearest city for permanent employment.

The information on occupations and employment opportunities showed that although a significant number of farm operators were employed in off-farm jobs, the occurrence of job opportunities was very limited. Many of those operators who had jobs were included in the group who were not aware of other available job opportunities in the district. This



suggests that while individuals were able to obtain employment, the creation of new jobs and the demand for labour fell short of the supply. Apart from some employment at the Cold Lake Air Force Base, there were no major industries or factories in the area to provide jobs for unemployed workers who found it necessary to migrate to the city in search of employment.

There were no local agencies to supply farmers with information on job opportunities nor to assist young people in choosing a career. Two farmers in five said that they would go to the National Employment Service in Edmonton if they required information on job opportunities. Twenty percent of the operators said that they would personally go in search of jobs or make personal contact, and another 26 percent did not know where they could go to obtain information about jobs. Other sources of information mentioned by farmers were the District Agricultural Officer's Office (3), construction firms (6), relatives (2), neighbours and friends (1) (Table 10).

TABLE 10

FARM OPERATORS' OPINIONS ON SOURCES OF JOB INFORMATION,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Source of Job Information	Farm Operators Reporting	
	Number	Percent
Labour Office, Edmonton	63	43.7
Personal Contact	31	21.5
Don't Know	37	25.7
D.A.'s Office	3	2.1
Construction Firm	6	4.2
Relatives	2	1.4
Neighbours and Friends	1	0.7
Oil Companies	1	0.7
Total	144	100.0

No specific information was obtained concerning the news media





through which farmers obtained general or specific information. Nevertheless, information was obtained on the possession of such items as radios and televisions and subscriptions to magazines and newspapers. Every household visited had at least one radio and it was the chief source of information and entertainment for families in the Bonnyville District. More than half of the homes surveyed had a television but this appeared to be mostly as a source of entertainment. The other important news media were newspapers and magazines. Nearly all the homes visited (96 percent) received one or more daily or weekly newspapers, and approximately 80 percent subscribed to magazines. These sources of information were more effective for farm and employment information than radio and television because of the wide circulation and convenience for leisurely reading and availability when needed. Although some of the magazines and newspapers carried some information on job opportunities, the information was quite general. Moreover, farmers did not regard these media as important sources of information for job opportunities. As sources of information on farming activities, however, farm papers and magazines were undoubtedly the most important to farmers.

The absence of any organized labour market was undoubtedly a major handicap to persons desirous of obtaining off-farm employment. Those who had found employment pointed out that they obtained these jobs through "personal contact" or through some relative or friend. Ten of the 18 operators who wanted part-time jobs but were unable to find any had actively looked for jobs. Six had made personal contacts, one had visited the National Employment Service, the others had contacted various other sources. The National Employment Service was not regarded as a very effective source of job information by farm operators.



## Social-Psychological Factors

### Attachment and Attitude Towards Farming

Attitude is defined by Thurstone as the degree of positive or negative affect associated with some psychological object.<sup>1</sup> Thurstone defines psychological object as any symbol, phrase, slogan, person, institution, ideal or idea toward which people can differ with respect to positive or negative affect. A particular job, for example, may be a psychological object. In the literature of psychology the terms "affect" and "feeling" are used interchangeably.

A farmer's attitude towards living on a farm or farming as a career may be established by his expressions, favourable or unfavourable, towards farming and the community in which he lives. According to Edwards "an individual who has associated positive affect or feeling with some psychological object is said to like that object or to have a favourable attitude toward the object. An individual who has associated negative affect with the same psychological object would be said to dislike that object or to have an unfavourable attitude toward the object".<sup>2</sup>

Some indication of farm operators' attitudes towards farm and non-farm occupations was obtained by investigating their preferences for these occupations. Eighty-one farm operators, or 56 percent of the respondents, indicated a personal preference for "farming and ranching"

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<sup>1</sup>L.L. Thurstone and E.J. Chave, The Measurement of Attitude (Chicago: University of Chicago Press, 1929).

<sup>2</sup>Allen L. Edwards, Techniques of Attitude Scale Construction (New York: Appleton-Century-Crofts, Inc., 1957), p. 2.





(only a few actually mentioned ranching). The remaining 44 percent considered some type of non-farm occupation (Table 11).

TABLE 11

TYPE OF WORK FARM OPERATORS WOULD CHOOSE IF GIVEN A FREE CHOICE,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Job Preference	Farm Operators Reporting	
	Number	Percent
Farming and Ranching	81	56.3
Carpentry	9	6.3
Mechanical Work	9	6.3
Janitor	8	5.6
Plumbing and Machinist	4	2.7
Construction and Maintenance	4	2.7
Electrical	3	2.1
Bus and Truck Drivers	3	2.1
Clerical	2	1.4
Others	11	7.6
Don't Know	10	6.9
Total	144	100.0

Approximately half of the farm operators indicating a personal preference for farming said that they "like farming", 34 expressed their preferences in such phrases as "farming offered freedom" or "independence" and an individual was his "own boss" (Table 12). Security in farming and regular work was the reason given by 10 respondents and 10 others were of the opinion that the farm was "a better place for raising children". These responses provided further indication of the attitudes of these operators to farming as an occupation. This indicated a favourable attitude towards farming and suggested some of the reasons why these operators felt strongly attached to, or had some identification with, farming.

Farmers who expressed preference for non-farm jobs indicated by their responses similar favourable attitudes towards non-farm



occupations and accordingly unfavourable attitudes towards farming. Of the 63 who expressed a preference for non-farm jobs, 16 said it was their personal preference, 14 reported that they had training and experience in the particular field, six were of the opinion that there was "no security in farming", and six said that they were assured a better income in the non-farm occupation.

TABLE 12

OPERATORS' REASONS FOR CHOOSING FARMING AS AN OCCUPATION,  
BONNYVILLE MUNICIPAL DISTRICT, 1965<sup>a</sup>

Reasons for Choosing Farming	Farm Operators Reporting	
	Number	Percent
Personal preference or likes farming	41	50.6
Independence or own boss	34	42.0
No other choice (no alternative training or education)	11	13.5
Security in farming, regular work	10	12.3
Better place for raising children	10	12.3
Assured a better income	6	7.4
Training and experience in this field	8	9.9
Old age and poor health	3	3.7

<sup>a</sup>Total number of farm operators reporting, 81.

Attitude towards farming or to the community had little relationship to current satisfaction or dissatisfaction with returns from farming. This was suggested by the fact that 121 respondents, or 84 percent of all the farm operators interviewed, expressed dissatisfaction with their average farm incomes. These operators felt that on the average the incomes from the farms were insufficient to support their families adequately. A number of reasons were given for the low farm returns, such as, inadequacy of capital, small acreages and poor soil conditions. Most operators were of the opinion that their farms were too small and with bigger farms their earnings could be improved.





Attachment to the community can often be a greater impediment to mobility than attachment to the farm. In many cases farm operators would accept off-farm employment but prefer to live on the farm or in the community. In this study few of those operators who indicated willingness to migrate into non-farm jobs expressed any inhibitions about leaving the community. There was little evidence of any strong attachments to the community, or of community spirit or esprit de corps among this group of farm operators.

### Social Participation

Personal expressions of satisfaction with one's everyday personal life experiences is another category of expression from which attitudes and values may be inferred. According to Bertrand "satisfaction implies good adjustment of the person to the social situation. People who are active in group affairs are better satisfied with their personal living, with their homes, families, jobs and personal social experiences in general".<sup>1</sup> Involvement in community activities and satisfaction with one's social status in the social environment induce strong ties and identification. This often presents an impediment to the mobility of the individual. Social participation is a measure of an individual's involvement in the community. It is defined as "those diverse activities engaged in by a person either with other individuals or with groups".

Social participation can be considered in both formal and semi-formal organizations. The former includes churches, farmer organizations, lodges, service clubs, co-operatives, etc. Being a member and

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<sup>1</sup>Bertrand, op. cit., p.139.



taking part in such groups is referred to as formal social participation. On the other hand buying supplies, marketing farm produce and borrowing money, are forms of semi-formal social participation.<sup>1</sup>

A number of techniques have been developed for the measurement of social participation. Some of these consider only participation in formal organizations. A technique developed by Hay, however, also considers participation in informal groups.<sup>2</sup> In the present study a modification of the Hay technique was used since it was observed that membership and patronage in informal groups were important in the Bonnyville area. Marketing days, buying and selling at the co-operative stores and auction markets were the focal points of economic activities for farmers in the area and provided a principal venue for socializing.

The total participation score for a person was obtained by summing up the weights assigned to each activity category in all organizations in which the person had membership.<sup>3</sup> The results of this analysis indicated a low level of social participation in the Bonnyville District. Although membership was high in certain organizations social interaction was low (Table 13).

Examination of the data indicated that affiliation to a church was the most frequent form of membership, 78 percent of the respondents

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<sup>1</sup>Ibid.

<sup>2</sup>Donald G. Hay, "A Scale for the Measurement of Social Participation of Rural Households", Rural Sociology, 1948, 13:pp.285-294.

<sup>3</sup>Scores were assigned as follows:

<u>Membership</u>		<u>Attendance at Meetings</u>	
Member only	1	Seldom attendance	1
Committee member	2	Occasional attendance	2
Officer	3	Regular attendance	3

From this scale social participation scores ranged from 0 to 35. A score of 11 or less was considered low participation; scores between 12 and 23, medium participation; and 24 and over, high participation.





reported religious affiliations (Table 14). Membership per se, however, is not an adequate measure of social participation; attendance at church services is a more important criterion. Approximately 58 percent of the church members attended services "regularly", 21 percent attended "occasionally", and the remaining 21 percent said that they "seldom" attended church services (i.e., about once per year or less).

TABLE 13  
SOCIAL PARTICIPATION SCORES

Rating	Score Class	Farm Operators	
		Number	Percent
High	24 - 35	12	8.4
Medium	12 - 23	48	33.3
Low	0 - 11	84	58.3

TABLE 14

MEMBERSHIP IN FORMAL AND SEMI-FORMAL SOCIAL ORGANIZATIONS REPORTED BY 144 OPERATORS, BONNYVILLE MUNICIPAL DISTRICT, 1965

Organization	Farm Operators Reporting	
	Number	Percent
Church	139	96.5
Political Party	17	11.8
Farm Organization	72	50.0
Co-operative (patron)	93	64.6
Social Clubs	11	7.6
Service Organizations	3	2.1
Labour and Credit Unions	9	6.2
Special Farm Organizations <sup>a</sup>	4	2.8

<sup>a</sup>Includes Purebred and Holstein Clubs.

The next most frequently occurring membership reported was in the farmers' co-operatives. These co-operatives had been organized to encourage and facilitate individual participation in the economic life of



the community. In the absence of such institutions it was often impossible for the individual to achieve economic independence, thus limiting his participation in the non-economic activities of the community. There were three types of co-operatives in the area organized for the marketing of grain, livestock and dairy products. Of the farm operators reporting, 65 percent were members of at least one of these co-operatives. However, less than half of these members, 40 percent, patronized the co-operative stores "regularly", 19 percent were "occasional" patrons, and 41 percent reported that they "seldom" dealt with the co-operatives. The result of this low participation was to weaken the successful operations of such essential economic organizations.

There were a number of farm organizations in the area but membership in these was generally small and attendance at meetings poor. Fifty percent of the farm operators reported membership in at least one of these organizations. One out of every three members attended meetings "regularly", fewer attended "occasionally", and the largest group slightly less than one in two reported that they "seldom" attended meetings.

Very little interest was demonstrated in special farm organizations such as purebred clubs and 4-H clubs. Only four persons reported membership in any of these. Participation in trade union or credit union activities was very low. Only nine operators were members of credit or labour unions.

Membership in social clubs occurred much less frequently than membership in farm organizations and co-operatives. Only 11 farm operators participated in any social clubs and three reported membership in service organizations.





The rural church was the predominant socializing institution in the Bonnyville District. Apart from the church, and with the exclusion of farm organizations and co-operatives, there was very little social activity in the community. There were numerous reasons for this as evidenced by the suggestions of some of the respondents. Because of the gaps between the various ethnic and religious groups, membership was limited to small groups which were not self sustaining. It was also the view of many that the out migration of young people, who were the potential leaders of the community, resulted in disorganization and lack of interest among those who remained.

#### Levels of Living

An individual's attitude towards farming will also be determined by the satisfaction or dissatisfaction he and his family achieve through living on a farm. This entered into the decision-making process and influenced mobility decisions.

In trying to determine the individual's attitude through levels of living, there is the long term income position which enables the individual to achieve a certain economic status. The level of income he receives also enables him to acquire certain cultural goods the choice of which is determined by individual taste and by the society. To measure levels of living a number of scales have been developed using both economic and cultural criteria. Schuler points out the distinction between these two sets of criteria.<sup>1</sup> "Level of living", according to Schuler, means "the content of goods and services utilized by a particular

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<sup>1</sup>Edgar A. Schuler "Some Regional Variation in Levels and Standards of Living", Rural Sociology, Vol. IX, No. 2 (June 1944), p. 124,





population sample limited with regard to space, time and income",

"Standards of living" he defines as "those elements in the value pattern of a similarly limited population sample which are reflected, and to some extent measured by data on expenditure".

During the survey observations were obtained on the possession of a number of items which could provide some comparison between those willing to leave farming and those unwilling to leave in the low income population. It also provided a useful indication of the disparity in levels of living between families in rural and urban areas. The items used were considered on the basis of a scale prepared by Edwards for rural families in the Prairie Provinces and on certain items reported by the Canada Census since 1951,<sup>1</sup> (Table 15). To obtain individual scores the possession of each item was scored as one (1), and non-possession as zero (0). The possible scores obtainable ranged from 0 to the maximum of 16. Three classes were established, low level of living score from 0 to 5, medium 6 to 11, and high, 12 to 17. On the basis of these classes, 18 families, or 12 percent, received a low level of living score, 50 families, or 35 percent, fell into the high class and just slightly more than 52 percent or 76 families, fell into the medium level of living category.

Examination of the possession of individual items provided a better understanding of rural family values and consumer habits. According to the respondents the majority of farms, or 77 percent, had electricity,

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<sup>1</sup>Allen L. Edwards, "Farm Family Living in the Prairie Provinces", Publication No. 787, Tech. Bull. No. 57, Dominion of Canada - Department of Agriculture, March 1947. The Edwards scale included both household conveniences and "some cultural aspects". The Census reports the possession of automobiles, farms with electricity, value of sales per farm and capital value per farm.





but less than one in three, or 32 percent, had running water. Indoor bath and hot water heater were present in one home in five, or 20 percent of all the farms surveyed. Food storage facilities were important on most farms because of the relative isolation and distance from shopping centres. Seventy percent of the farms had a refrigerator and 69 percent a deep freeze. Washing machines were quite common on the farms and were present in approximately 90 percent of the homes (Table 15). Such labour saving facilities were considered important by most farm families where the wife had to assist in doing some work on the farm.

Farm families in the Bonnyville District were more dependent on radio and television which provided them with weather and marketing information. Ninety-six percent of the farm families received at least one daily or weekly newspaper. The Farmers' Guide and The Western Producer were the two most commonly read weekly newspapers and provided news and information of farming activities. Magazines were also quite common in the homes, almost four out of every five homes received one or more. A relatively smaller proportion of the families surveyed had 10 or more books, which reflected a lower acculturation with the more progressive sections of the society.

The possession of books and magazines was not used as a measure of the extent of the reading habits of the individuals. Reading of such materials provided some indication of farm families' interest past or present and the extent of its cultural participation or at least some aspect of it. Magazines and newspapers were perhaps more accurate indicators. Insofar as cultural interests in farming activities were concerned, these sources of information had the broadest circulation and reached most farmers. It was in this respect that newspapers and magazines were considered common social media and a form of cultural participation in the





rural society.

TABLE 15

NUMBER AND PERCENTAGE OF FARM FAMILIES REPORTING  
POSSESSION OF LEVELS OF LIVING ITEMS,  
BONNYVILLE MUNICIPAL DISTRICT, 1965<sup>a</sup>

Items	Yes	
	Number	Percent
Electricity	111	77.9
Telephone	29	20.1
Running Water	46	31.9
Indoor Bath	31	21.5
Hot-water Heater	33	22.9
Central Heating	67	46.5
Radio	144	100.0
Television	83	57.6
Refrigerator	101	70.1
Deep Freeze	99	68.7
Power Washer	129	89.6
Books - 10 or more <sup>b</sup>	100	69.4

<sup>a</sup>Total number of farm operators reporting, 144.

<sup>b</sup>Does not include school texts.

Another level of living scale which has received wide attention is Hagood's "farm operator family level of living indexes".<sup>1</sup> In this scale four items were included: (1) the percentage of farms with electricity in the farm dwelling; (2) the percentage of farms with automobiles; (3) the percentage of farms with telephones in the farm dwelling; and (4) the average value of products sold or traded in the preceding year per farm reporting. The use of only these four items was justified by Hagood on the grounds that "the various goods, services and other satisfactions that make up the 'level of living' as the term is generally used, are usually highly intercorrelated". This scale was prepared by Hagood to compare material

<sup>1</sup>Margaret Jarman Hagood, Farm Operator Family Living Indexes for Counties of the United States, 1940 and 1943 (Washington Bureau of Agricultural Economics, May 1949), p.4.





levels of rural living for all counties in the United States. Corresponding items have been reported in the Census of Canada since 1951 and have provided a useful basis for comparing average farm level of living in rural Canada. When these indicators were considered for the farms surveyed, the number of farm dwellings with electricity (77 percent) was less than the average for Census Division 12 and for Canada as a whole. The number of farm families reporting automobiles was higher than for Census Division 12 but lower than the provincial or national average. Only 20 percent of the farm dwellings had telephones. The average value of products sold off the farms in 1964 was \$4,503, which was less than 50 percent of the provincial average though somewhat higher than the average for Census Division 12 (Table 16).

TABLE 16

INDICATORS OF AVERAGE FARM LEVEL OF LIVING, 1961

Item	Census Division 12	Alberta	Canada	Bonnyville <sup>a</sup> Municipal District
Value of sales per farm	\$2,707	\$5,997	\$4,880	\$4,503
Farms reporting automobiles	49.7%	65.5%	68.5%	61.1%
Farms reporting electricity	85.9%	91.4%	85.9%	77%
Farms reporting telephones	—	53 %	—	20%

<sup>a</sup>Sample Survey Data, 1964

Source: Canada, Department of Agriculture, Economics Division, Directory of Cooperative Associations in Canada, Publ. 62/26, Ottawa, 1962.

Dominion Bureau of Statistics, Survey of Production, 1961.  
Census of Canada, Vol. 5, Agriculture Bull. 5, 3-3:  
Alberta, 1961.

Economic Factors

Investment and Equity

Capital investment in the farm enterprise is an important variable





in occupational mobility decisions. Total investment in the farm is a function of several factors including initial capital available when starting farming, type of farming, level of returns over a number of years, and experience in farming. It is inferred from this that under favourable conditions farmers are generally able to accumulate capital over the years and to strive for a high equity in the farm business as they approach the age of retirement.

Farm operators with a high level of investment in farming usually achieve a greater sense of security in farming than those farmers with low capital investment. Investment in the farm is inextricably tied in with the family living conditions and because of this farm-household relationship, this consideration assumes even greater importance. Family consumption of certain durable goods often accounts for a significant proportion of the total farm investment.

The average capital investment for the 144 farms surveyed was \$29,714, which was more than the average for Census Division 12 (\$18,450), but less than the provincial average (\$37,120). Investment in land and buildings constituted the largest proportion of the total farm investment. Of the total farm investment in the Bonnyville District approximately 60 percent was invested in lands and buildings. Investment per farm ranged from \$1,000 to a maximum of \$94,000. The average investment in lands and buildings was \$17,428 (Table 17). The larger proportion of this was invested in lands. A significant proportion of the farm buildings were old homesteads, many in a state of disrepair.

Machinery was essential for farming in the Bonnyville District and constituted a major investment on the farms. In fact, most farmers considered the high cost of farm machinery and maintenance to be the biggest





factor cost in the farm operations. The high cost was also reported as one of the biggest problems facing farmers. The average farm had approximately \$7,433 invested in farm machinery and equipment. As would be expected, the farming operations varied from area to area, and expenditure on machinery reflected these variations. These investments ranged from \$1,100 to over \$40,880 (Table 18).

TABLE 17

FARM OPERATORS' ESTIMATE OF CAPITAL INVESTMENT IN LANDS AND BUILDINGS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964

Investment in Lands and Buildings	Farm Operators Reporting	
	Number	Percent
Under \$5,000	8	5.6
\$ 5,000 - \$ 9,999	28	19.4
10,000 - 14,999	23	16.0
15,000 - 19,999	34	23.6
20,000 - 24,999	21	14.6
25,000 - 29,999	10	6.9
30,000 - 34,999	11	7.6
35,000 - 49,999	5	3.5
50,000 and over	4	2.8
	144	100.0
Minimum - \$ 1,000		
Maximum - \$94,000		
Mean - \$17,428		
Mode - \$14,950		

The other major item considered under total capital value was investment in livestock which was more important in the Bonnyville District than crop farming. Total investment in this sector represented approximately 16 percent of the total farm investment. On the average farmers invested \$5,099 in livestock, mainly cattle and hogs (Table 19).

The total capital investment in farming provided a useful indicator of the extent to which agriculture dominated the rural economy



in the Bonnyville District. Investment in the individual farm business represented an impediment to occupational mobility. On the one hand it provided some security to the farm operator and his family; and on the other hand most operators who would be willing to migrate did not do so unless the farm was sold prior to leaving. Disposal of the homestead was often difficult, particularly where the location was removed or inaccessible and soil conditions marginal. At least one operator pointed out this particular difficulty. He would readily sell and leave, but, his farm was too small and soil conditions were poor so that he was unable to find a buyer.

TABLE 18

TOTAL INVESTMENT IN FARM MACHINERY AND EQUIPMENT REPORTED BY  
FARM OPERATORS, BONNYVILLE MUNICIPAL DISTRICT, 1964

Investment in Farm Machinery and Equipment	Farm Operators Reporting	
	Number	Percent
\$ 1,000 - \$ 2,999	27	18.8
3,000 - 4,999	28	19.4
5,000 - 6,999	27	18.8
7,000 - 8,999	22	15.3
9,000 - 10,999	11	7.6
11,000 - 12,999	13	9.0
13,000 - 18,999	11	7.7
19,000 and over	5	3.4
Total	144	100.0
Minimum - \$ 1,100		
Maximum - \$40,880		
Mean - \$ 7,433		
Mode - \$ 4,690		





TABLE 19

TOTAL INVESTMENT IN LIVESTOCK REPORTED BY FARM OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964

Investment in Livestock	Farm Operators Reporting	
	Number	Percent
Under \$1,000	5	3.7
\$ 1,000 - \$ 1,999	20	14.6
2,000 - 2,999	21	15.3
3,000 - 3,999	18	13.1
4,000 - 4,999	19	13.9
5,000 - 5,999	15	10.9
6,000 - 6,999	13	9.5
7,000 - 9,999	15	11.0
10,000 and over	11	8.0
Total	137	100.0
Minimum - \$ 30		
Maximum - \$28,160		
Mean - \$ 5,099		
Mode - \$ 1,999		

Equity

Total investment in the farm was presented as a major deterrent to mobility. On many farms, however, the family's net worth position might be a more important consideration than gross assets. In other words the equity which a farm family has in the farm business is frequently a more important criterion than the total value of assets per se. Farm operators with low equities will necessarily feel less secure than operators with high equities. There are, however, other factors to be considered. According to Heady younger farmers are more concerned with economic considerations, i.e., with improving their income positions.<sup>1</sup> Hence, they take more risks, seek more credit and have lowest equities.

<sup>1</sup>Heady, et al, Interdependence Between the Farm Business and the Farm Household with Implications in Economic Efficiency.



Older farmers are less concerned with economic considerations; they are more concerned with either making farming a way of life or with retirement plans. They are, therefore, concerned with repaying outstanding loans and building up their equity position as a basis for retirement.

The simple hypothesis outlined above requires some modification when applied to a traditionally low-income agricultural environment where not only are farm incomes already low but where returns are unstable. This uncertainty is present in the minds of young and old farmers alike. If, therefore, the hypothesis is accepted, that paying off debts and attainment of full equity in the assets of the farm are major elements entering into the goals of farm families, then the equity position will be a major consideration with all low-income farmers but particularly so with older farmers.

Another risk consideration which is involved here is that small farmers may be more prone to take risks and drive equity lower than the large operator because of a smaller stake in the outcome. This proposition, however, would appear to have greater application where the probability of success is more than 50-50. However, in a low-income farm area such as the one under present consideration, farmers are often faced with successive years of crop failures; low outputs are the norm rather than the exception and prices are generally low. Faced with these uncertainties and conditioned as they are by their meagre environment, these farmers are generally less prone to take risks than their counterparts in better farming districts who stand a better chance of success and possibility of repayments.

In considering equity of farm operators gross capital value comprised total investment in lands and buildings, farm machinery and





equipment, and livestock. Total family debts included both household and farm business liabilities. Because of the farm-household relationship in this study, it was not considered desirable to separate the two. The use of farm credit is often determined by the availability and cost of such capital. Credit facilities were available to farmers in the area from commercial banks and government sources. There was no indication that there was a "squeeze" on capital available to farmers. Approximately one-fifth of the farm families had no outstanding debts at the time the survey was made (Table 20). In other words these families had full ownership of the farm business. There were four percent who had less than 50 percent equity in the farm business and an additional 20 percent had less than 75 percent equity.

TABLE 20

PERCENTAGE EQUITY IN FARM BUSINESS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964<sup>a</sup>

Percentage Equity	Farm Operators Reporting	
	Number	Percent
49 and under	6	4.2
50 - 59.9	7	4.9
60 - 69.9	15	10.4
70 - 74.9	6	4.2
75 - 84.9	31	21.6
85 - 94.9	28	19.4
95 - 99.9	24	16.6
100 -	27	18.7
Total	144	100.0

<sup>a</sup>Percentage equity =  $\frac{\text{Gross Capital Value} - \text{Total Family Debts}}{\text{Gross Capital Value}} \times 100$

It was suggested earlier that under unfavourable agricultural conditions all farmers were subjected to the many uncertainties of farming and, therefore, were likely to avoid pushing their equity levels too



low. This is supported by the data in Table 20, which shows the majority of farm families with substantial equities in the farm firm. Perhaps the only group that would not be too easily disturbed by these considerations, or likely to be less cautious, would be operators just entering farming and not yet conditioned by the adversities of farming.

### Farm Income

Economic betterment is an expressed goal of farmers and non-farmers alike. It is perhaps the most important consideration prompting the individual to change occupations. Occupational mobility attests to the income differentials which exist between one occupation and another or between one region and another region. Typically returns to labour inputs are higher in urban industries than in agriculture. Urban families enjoy higher wages and higher standards of living than rural families and participate to a greater extent in the social and economic activities of the society. The historic rural-urban migration supports the hypothesis that rural people, denied a greater or more equitable share in the prosperity of society, migrate to urban and industrial centres in search of social and economic betterment. A larger proportion of migrants are younger men from rural families who seem more concerned with economic goals and higher marginal return is a primary objective. Older farmers seem less concerned with economic goals but more concerned with rural values or with making farming a way of life. This difference in the socio-economic attitudes contributes to the higher rate of mobility among younger farmers than older farmers.

Data on rural-urban migration show that a greater proportion of low-income farm operators and farm families participate in the rural-urban





movement. A higher proportion of such persons are in the younger age groups. The high income group is in a better economic position to acquire on the farms many of the amenities enjoyed by urban families and they do not feel the same compulsions to pursue these material goals by moving to urban centres.

Several income criteria were employed to examine the economic conditions of the farm families in the Bonnyville Municipal District. One measure of economic activity or size of farming operations was the gross returns from the sale of farm products. While this criterion provides some basis for assessing scale of operation, it does not provide a very useful measure of the family's socio-economic position. Other factors must also be taken into consideration. Twenty-four percent of the commercial farms<sup>1</sup> in the Bonnyville District had gross sales of farm products of less than \$2,500--a level which has frequently been quoted as the poverty line (Table 21). This reflected a better income position than for Census Division 12 as a whole where the percentage of commercial farms earning less than \$2,500 in 1961 was 37 percent. The provincial average was slightly higher, 23 percent. Fourteen percent of all the farms fell into the non-commercial farm category, with gross sales of farm products of less than \$1,200. This compares with 32 percent and 21 percent for Census Division 12 and Alberta respectively. There were seven farms reporting total value of farm products sold of more than \$10,000. The mean gross income was \$4,503 and the modal sales were \$3,201. In comparison urban families in Alberta had mean earnings of \$5,894 in 1961.

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<sup>1</sup>The definition of commercial farm used here is that employed by the Census of Canada which defines commercial farms as "all farms (except 'institutional farms, etc.') with a total value of agricultural products sold of \$1,200 or more". Gross sales of \$2,500 is frequently employed by ARDA as the poverty line.



TABLE 21

FARMS CLASSIFIED BY ECONOMIC CLASS OF FARMS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964

Total Value of Products Sold of:	Farm Operators Reporting	
	Number	Percent
Commercial Farms		
\$15,000 and over	3	2.1
10,000 - \$14,999	4	2.8
5,000 - 9,999	34	23.6
3,750 - 4,999	22	15.3
2,500 - 3,749	31	21.5
1,200 - 2,499	30	20.8
Non-Commercial or Small Scale Farms		
(Value of products sold of \$250 - \$1,199)	18	12.5
Less than \$250	2	1.4
	<hr/>	
Total	144	100.0
Maximum - \$28,454		
Mean - \$ 4,503		
Mode - \$ 3,201		

Net farm income provided a more accurate criterion for assessing marginal returns to farming. One farm operator in every three had a net income of less than \$500 from farming operations during 1964 (Table 22). Nearly 50 percent had net returns of less than \$1,000. Approximately 11 percent had net incomes of \$3,000 or more. On 17 percent of the farms operating expenses exceeded the farm income, and 3 percent of the farm operators had farm costs equal to the farm revenue.

The low income situation on the farms offered one explanation for the number of farm operators and other family members who were engaged in off-farm employment. There were 45 operators, or one in every three, who had received some income from off-farm employment during the previous year. Twenty other members of the families were reported as having received





incomes from off-farm employment. Operators' incomes from these sources ranged from \$24 to \$5,800 with modal earnings of \$1,587. Mean earnings by other members of the families reporting off-farm work was \$1,400.

TABLE 22

NET INCOME FROM FARMING REPORTED BY FARM OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964

Net Farm Income	Farm Operators Reporting	
	Number	Percent
Net loss	25	17.4
\$ 0 - \$ 499	23	15.9
500 - 999	22	15.4
1,000 - 1,499	17	11.8
1,500 - 1,999	11	7.6
2,000 - 2,499	18	12.5
2,500 - 2,999	12	8.3
3,000 - 3,499	10	6.9
3,500 and over	6	4.2
Total	144	100.0
Minimum - \$-2,138		
Maximum - \$10,350		
Mean - \$ 1,319		
Mode - \$ 108		

Another income criterion, net family income, represented income available to farm families for consumption and savings; hence it provided a more useful criterion for assessing the family's socio-economic position. There were 25 percent of the farm families with incomes of less than \$1,000 and forty-five percent had incomes of less than \$2,000. Only 18 families had net family incomes in excess of \$4,000 (Table 23).

Farming in the Bonnyville District received a considerable proportion of the total revenue in the form of government subsidies and other unearned incomes. Eighty-seven percent of the farms surveyed reported having received supplementary farm payments. These included wheat bonuses,



P.F.R.A. payments and payments for hail damages. The total payments amounted to approximately \$59,500 in 1964 and ranged from \$30 to a maximum of \$1,529. The mean payment received per farm of such unearned income was \$408.

TABLE 23

TOTAL NET FAMILY INCOME REPORTED BY FARM OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1964

Net Family Income	Farm Families Reporting	
	Number	Percent
Under \$1,000	36	25.0
\$1,000 - \$1,999	29	20.2
2,000 - 2,999	32	22.2
3,000 - 3,999	29	20.1
4,000 - 4,999	10	6.9
5,000 - 5,999	4	2.8
6,000 and over	4	2.8
Total	144	100.0
Minimum - \$-1,122		
Maximum - 12,980		
Mean - 2,508		
Mode - 2,227		

Apart from farm subsidies 72 percent of the farm families received other incomes such as pensions and family allowances. These payments for 1964 ranged from \$10 to a maximum of \$1,500 and in the aggregate was \$33,159. The average amount received per family was \$318.

Agricultural subsidies constitute a major item in the national agricultural policy. The policy goal has been to assist farmers to overcome the years of low-incomes consequent on natural disasters and low prices. It is evident, however, that in many cases these subsidies along with other unearned incomes constituted the principal source of income





rather than a supplement to farm income. Furthermore, the aggregate of these incomes was in many cases only sufficient to provide a subsistence existence and, unfortunately, an encouragement to inefficient farm operators to remain in agriculture. When examined in the context of the overall farm revenue for the Bonnyville District these conditions are seen in their more disturbing perspective. Approximately 30 percent of total net farm incomes were returns from agricultural subsidies and 36 percent of total net family income came from non-farm sources.<sup>1</sup> This provided some indication of the extent to which farming was subsidized and also an indication of the low productivity of agriculture in the area.

#### Summary

From the foregoing analysis of the factors affecting occupational mobility the following important characteristics have been identified as being associated with the low-income farm operators and farm families in the Bonnyville Municipal District:

1. Few operators in the Bonnyville District were either under 25 years of age or over 65 years. Fifty-six percent of the operators were in the 35-44 years age group.
2. Seventeen percent of the operators had less than five years of formal schooling and 70 percent had completed eight or fewer years. Older farm operators had fewer years of formal schooling than younger operators. Only two operators had any formal technical training but several had experience in such non-farm activities as carpentry, mechanical work and brick-laying.

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<sup>1</sup>Non-farm sources here include pensions, family allowances, family incomes from off-farm employment. If agricultural subsidies are included then more than half (52.8 percent) of the total net family income was derived from sources other than from the sale of farm commodities.



3. Farm operators expected a much higher income from non-farm employment than they normally received from their farming operations. The incomes which they considered would be adequate to induce them to leave farming ranged from \$200 to \$600.

4. Farm operators indicating willingness to leave farming felt they might require financial assistance. This ranged from \$300 to \$2,000 depending on the distance they would have to move. Disposal of the farm was a major consideration.

5. There were no organized labour services in the Bonnyville District to provide farm workers with information of alternative job opportunities. Nevertheless, one-fifth of the Bonnyville farmers had participated in some type of off-farm work during the two years, 1963-64. These were mostly part-time jobs requiring little skills or job training.

6. Attachments to the rural communities and favourable attitudes towards farming were factors impeding off-farm migration. Participation in social organizations was very low and was not an important impediment to mobility.

7. Farm families in the Bonnyville District ranked lower than other provincial and Canadian average farm families using any of the following criteria: (a) capital value per farm, (b) value of sales per farm, (c) number of farms reporting automobiles, (d) number of farms with electricity, and (e) number of farms with telephones.

8. Forty-four percent of the farm operators surveyed indicated willingness to leave farming for regular non-farm occupations.

9. Twenty-four percent of the commercial farms surveyed in the





Bonnyville District had gross sales of farm products of less than \$2,500. Twenty-five percent of the families had total net incomes of less than \$1,000 and 45 percent had less than \$2,000.

10. Eighty-seven percent of the farms surveyed received agricultural subsidies and 72 percent received such non-farm incomes as pensions and family allowances. Approximately 30 percent of total net family income came from agricultural subsidies and 36 percent from other government payments. Altogether more than half the total net family income was derived from sources other than from the sale of farm commodities.

11. An important conclusion was that low-incomes per se do not bring about dissatisfaction with farming nor will it induce occupational mobility. There must be a combination of factors to bring about the decision to migrate. This conclusion was inferred from the data which shows that 84 percent of the farm operators expressed some dissatisfaction with their farm returns; yet only forty-four percent expressed willingness to leave farming for other occupations.



## V. NON - PARAMETRIC STATISTICAL ANALYSIS

Two important objectives of the study were to determine (a) the important variables associated with willingness or readiness to leave farming for a non-farm occupation (i.e., potential mobility) and (b) to determine the interrelationships between the selected independent variables.

In order to determine the relationship between any one independent variable and willingness to leave farming, farm operators may be separated on the basis of values or classes of the selected independent variable. The percentage or frequency of farm operators in each class who are willing and who are unwilling to leave farming can then be determined. Such a simple and direct method, however, has the serious disadvantage in that it ignores other characteristics which influence "potential mobility", and there are unequal proportions of farmers with these characteristics in each of the classes of the variables being studied. To overcome this disadvantage cross-classification analysis provided a useful approach. This method of analysis takes account of the intercorrelations. Thus, it yields a net relationship between a factor and the probability that an operator was willing to leave farming.

The variables selected for examination were both quantitative and dichotomous. The dichotomous variables were coded as one for "yes" and zero for "no". Scales were prepared for these variables and the total score subdivided into classes. There were several variables considered in the study which constituted sub-hypotheses to the main hypothesis. Each of these variables was tested against the dependent variable and also in association with each other. In the statistical analysis a null hypothesis was established in each case. The critical level of significance





considered acceptable for each was 5 percent. The degree of association or strength of the relationship between paired variables was measured by Phi and Pearson's Contingency Coefficient.<sup>1</sup> Phi was computed for 2x2 tables and the Contingency Coefficient for larger tables. In each case the direction of association was inferred by inspection of the cross-classification tables.<sup>2</sup>

### Personal Factors

#### Age

Age of farm operators was selected for the study on the assumption that in a low-income farm area younger farm operators would be more willing to leave farming than older operators. The null hypothesis formulated to examine this relationship was that:

- in a low-income agricultural region no difference existed in the rates of potential mobility (or farm operators' willingness to leave farming) between younger farm operators and older operators -

The sample of farm operators was divided into three categories according to age. Young operators were considered in the age group 15 - 34, middle-age operators from 35 - 49, and older operators 50 years of age and over. These three classes were then cross-classified with the dependent variable with the assumption that all other factors were held constant. The results showed a positive relationship between age and willingness to leave farming for a non-farm job. There was a greater willingness among older

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<sup>1</sup>Ronald Anderson, Cross Classification with Subdivision--Program CROS-1, Paper published by Ronald Anderson, Institute for Sociological Research; University of Washington, Seattle, Washington, September, 1964.

<sup>2</sup>Hans Zeisel, Say it With Figures (4th ed., New York: Harper & Brothers, Publishers, 1957).





operators (51.3 percent), 50 years of age and over, to leave farming than among the youngest group of operators (29.4 percent) (Table 24).

TABLE 24

AGE OF FARM OPERATORS AND WILLINGNESS TO MIGRATE FROM THE FARM,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Age of Operators	Willingness to migrate from the farms					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
15 - 34	10	29.4	24	70.6	34	100.0
35 - 49	29	43.9	37	56.1	66	100.0
50 and over	20	51.3	19	48.7	39	100.0
Total	59	42.2	80	57.6	139	100.0

$$\chi^2 = 3.6712 \quad \text{d.f.} = 2 \quad C = 0.1604 \quad \text{level of significance} < 0.250$$

It was inferred from the small chi-square of 3.6712 that there was little statistical basis on which to differentiate the two groups--those operators willing to leave and those unwilling to leave. It was concluded that the observed difference might be attributed to chance and, therefore, the null hypothesis was accepted (d.f. = 2,  $p < 0.250$ ).

### Education

The years of schooling of farm operators were divided into three classes, low level of education, four years and less; medium, five to eight years; and high, nine years and over. These three classes were then cross-classified with the dependent variable.

Education, unlike age, was found to have an inverse correlation with willingness to leave farming for non-farm occupations. There was a relatively higher percentage (45.5 percent) of farm operators with four years or less of formal schooling expressing willingness to leave farming than those operators with nine years and more of formal schooling (38.1





percent) (Table 25).

TABLE 25

OPERATORS' EDUCATION AND WILLINGNESS TO MIGRATE FROM THE FARM,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Number of Years of Schooling Completed	Willingness to migrate from the farms					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
0 - 4	10	45.5	12	54.5	22	100.0
5 - 8	33	44.0	42	56.0	75	100.0
9 and over	16	38.1	26	61.9	42	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 0.4811 \quad \text{d.f.} = 2 \quad C = 0.0587$$

Using different levels of education as the criteria, it was not possible to differentiate between those operators willing to leave farming and those expressing unwillingness to leave. This was the conclusion drawn from the small chi-square of 0.4811. The null hypothesis that there was no difference in the attitude of these farm operators towards leaving the farm was therefore accepted (d.f. = 2).

### Occupational Factors

The occupational variables examined were farm operators' knowledge of alternative job opportunities within the region, alternative skills and job training. A relatively higher percentage (65.8 percent) of those who were aware of alternative job opportunities in the area indicated unwillingness to leave the farms compared to those who were unaware of alternative job opportunities (48.5 percent). Of the latter group the percentage of those expressing willingness or unwillingness to leave farming was approximately evenly divided (Table 26).



TABLE 26

OPERATORS' KNOWLEDGE OF FULL-TIME JOB OPPORTUNITIES AND  
WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Operators' Knowledge of Full-time Job Opportunities	Willingness to migrate from the farms				Total	
	Yes		No			
	Number	Percent	Number	Percent	Number	Percent
Yes	25	34.2	48	65.8	73	100.0
No	34	51.5	32	48.5	66	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 4.2311 \quad \text{d.f.} = 1 \quad C = \text{n.a.} \quad \text{level of significance} < 0.050$$

There was a statistically significant difference between those willing to leave and those unwilling differentiated on the basis of knowledge of job opportunities. In this case the null hypothesis was rejected.

The second occupational variable was not considered because of the insufficient information gathered on this factor.

Social-Psychological Factors

Levels of Living

Levels of living scores were subdivided into three classes, viz., low 0 - 5; medium 6 - 11; and high 12 - 17.<sup>1</sup>

There was little difference in the attitudes of farm operators with low levels of living and high levels of living scores towards leaving the farms for non-farm jobs (Table 27). There was some indication, however, that farm families with low and high levels of living scores were

<sup>1</sup>Refer p. 80 for a discussion on levels of living.





somewhat more inclined to remain in farming than to leave. Of those with low scores 62.5 percent indicated unwillingness to leave and of those with high scores 65.9 percent. Farm operations in the medium group were more evenly divided in their attitudes towards leaving or staying. A possible explanation for this may be that farm families with low levels of living scores had low aspirations or were not prepared to give up the security which living on the farm offered despite the fact that they were not making a success of farming. On the other hand, farm families with high levels of living scores were satisfied with their living conditions on the farms; hence, they were more contented to remain in farming.

TABLE 27

OPERATORS' WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB AND  
LEVELS OF LIVING, BONNYVILLE MUNICIPAL DISTRICT, 1965

Levels of Living Score	Willingness to migrate from the farm				Total	
	Yes		No			
	Number	Percent	Number	Percent	Number	Percent
0 - 5	6	37.5	10	62.5	16	100.0
6 - 11	38	48.1	41	51.9	79	100.0
12 - 17	15	34.1	29	65.9	44	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 2.483 \quad \text{d.f.} = 3 \quad C = 0.326 \quad \text{level of significance} < .500$$

There was no statistically significant difference in the willingness or unwillingness to leave farming between those with high and low level of living scores. On the basis of the low chi-square (2.483) the null hypothesis was accepted (d.f. = 3,  $p < 0.50$ ).



## Social Participation

Social participation was another social-psychological factor considered in relation to farm operators' willingness to migrate from low productive farms. To examine this relationship social participation scores were subdivided into three classes; low, 0 - 11; medium, 12 - 23; and high 24 - 35. The last two categories were combined because of the small numbers of operators with high scores (Table 28).

TABLE 28

### SOCIAL PARTICIPATION AND OPERATORS' WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB, BONNYVILLE MUNICIPAL DISTRICT, 1965

Social Participation Scores	Willingness to migrate from the farm				Total	
	Yes		No		Number	Percent
	Number	Percent	Number	Percent		
0 - 11 <sup>a</sup>	37	44.0	47	56.0	84	100.0
12 - 23 <sup>b</sup>	18)	37.5)	30)	62.5)	48)	100.0
24 - 35 <sup>b</sup>	4) <sup>22</sup>	57.1) <sup>40</sup>	3) <sup>33</sup>	42.9) <sup>60</sup>	7) <sup>55</sup>	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 0.22 \quad \text{d.f.} = 1 \quad C = 0.04$$

<sup>a, b</sup>, these two rows were combined because of the small total values in the 24 - 35 class.

There was only a small difference between farm operators who actively participated in the activities of community organizations and those who were low participants in their attitudes towards leaving farming. A slightly higher proportion, 60 percent, of those with high participation scores indicated unwillingness to leave farms as compared to 56 percent of those with low scores.

There was no statistically significant difference between the two groups and it was not possible to differentiate between those willing





to leave farming and those who were not. On the basis of the chi-square of 0.222 the null hypothesis was accepted (d.f. = 1).

### Attitude Towards Farm and Non-Farm Occupation

There was a direct relationship between personal preference for farming as an occupation and unwillingness to leave the farm. Eighty-four percent of those expressing personal preferences for farming indicated unwillingness to migrate from the farms. On the other hand, 75 percent of those expressing preference for some type of non-farm occupation indicated willingness to leave farming (Table 29).

TABLE 29

OPERATORS' WILLINGNESS TO MIGRATE FROM THE FARMS AND JOB PREFERENCE,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Operators' Willingness to migrate from the farms	Job Preference				Total	
	Farm		Non-Farm			
	Number	Percent	Number	Percent	Number	Percent
Yes	12	15.6	39	75.0	51	39.5
No	65	84.4	13	25.0	78	60.5
Total	77	100.0	52	100.0	129	100.0

$\chi^2 = 45.8374$       d.f. = 1      level of significance  $< 0.005$

A high chi-square of 45.8374 which was significant at 0.005 or beyond, indicated that it was possible to differentiate between the two groups on the basis of occupational preference. The null hypothesis in this case was rejected (d.f. = 1,  $p < 0.005$ ).

There was some indication that operators who had knowledge of job opportunities within commuting distance from the farm and who were interested in off-farm work would prefer to live on the farm and to work at a non-farm job on a part-time or seasonal basis when conditions on



the farm dictated this.

### Economic Factors

#### Investment in Farm Business

There was little difference in the attitude towards mobility of farm operators of uneconomic enterprises (i.e., those with capital investment in the farm under \$25,000) and operators of farms with higher capital investment. In the three classes of farm investment examined a higher percentage of farm operators of uneconomic enterprises indicated willingness to leave farming (Table 30). However, these relative percentages were not significantly different. Forty-three percent of the operators with low investment in the farms indicated unwillingness to leave farming compared with 40 percent of those with high investment. On the basis of the low chi-square it was not possible to distinguish between those operators willing to leave farming and those who were unwilling.

TABLE 30

TOTAL CAPITAL INVESTMENT AND FARM OPERATORS' WILLINGNESS  
TO LEAVE FARMING FOR A NON-FARM JOB,  
BONNYVILLE MUNICIPAL DISTRICT, 1965.

Total Capital Investment	Willingness to migrate from the farms					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Under \$25,000	29	43.3	38	56.7	67	100.0
\$25,000 - \$49,999	24	42.1	33	57.9	57	100.0
\$50,000 and over	6	40.0	9	60.0	15	100.0
Total	59	42.0	80	57.6	139	100.0

$$\chi^2 = .060$$

$$d. f. = 2$$

$$C = 0.02$$

Investment in land as measured by total acres operated was





significantly correlated with willingness to leave farming. There was an inverse relationship between total acres operated and operators' willingness to leave the farm. Thirty-eight percent of the operators of farms 80 to 240 acres indicated some willingness to leave farming whereas, a much smaller percentage, 22 percent of operators of larger farms (561 acres and over) were similarly inclined. The chi-square of 6.8163 (d.f.=2) was significant at 0.025 level or beyond. It was inferred from this that it was possible on the basis of farm size operated to identify between farm operators willing to leave farming and those who were not. Those with small holdings were more inclined to leave farming than operators of bigger farms in terms of acres operated (Table 31).

TABLE 31

OPERATORS' WILLINGNESS TO MIGRATE FROM THE  
FARMS AND TOTAL ACRES OPERATED,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Willingness to migrate from the farms	80 - 240		Total Acres Operated				Total	
			241 - 560		561 and over			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	9	37.5	44	50.0	6	22.2	59	42.4
No	15	62.5	44	50.0	21	77.8	80	57.6
Total	24	100.0	88	100.0	27	100.0	139	100.0

$$\chi^2 = 6.8163 \quad \text{d.f.} = 2 \quad C = 0.2162 \quad \text{level of significance} < 0.050$$

### Equity

Three classes of equity in the farm business were examined in association with farm operators' willingness to leave the farm. These were, low equity, 60 percent and less; medium equity, 61 to 74 percent; and high equity 75 percent and above.

No statistically significant difference was found between farm



operators with low and high equities in their attitudes towards leaving farming. Fifty-eight percent of those considered having low equities in the farm business were not willing to leave the farm compared with 54 percent of those with high equities. On the basis of equity in the farm business, therefore, it was not possible to identify the two groups of farm operators. The chi-square in this case was 3.001 (d.f. = 2).

### Farm Income

There was some indication that operators with small farm incomes were more willing to leave farming than those with higher incomes. Forty-two percent of those with incomes less than \$1,200 and 51.9 percent of those with incomes under \$2,500 indicated some willingness to leave farming. On the other hand, a smaller proportion, approximately 40 percent, of those with incomes \$2,500 and over were similarly inclined (Table 32).

TABLE 32

WILLINGNESS TO MIGRATE FROM THE FARMS AND TOTAL  
GROSS FARM INCOME REPORTED BY OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

		Total Gross Farm Income								Total	
		Under \$1,200		\$1,200-2,499		\$2,500-4,999		\$5,000 & over			
		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Yes	8	42.1	14	51.9	20	40.0	17	39.5	59	42.4	
No	11	57.9	13	48.1	30	60.0	26	60.5	80	57.6	
Total	19	100.0	27	100.0	50	100.0	43	100.0	139	100.0	
$\chi^2 = 1.2503$ d.f. = 3      C = 0.0944											

Similar relationships were found using any of the other measures of farm returns, net farm income or net family income. In none of these cases was there a statistically significant chi-square. It was therefore





not possible to differentiate between the potential migrant group and those unwilling to leave farming using farm income.

### Summary

From the foregoing analysis few of the selected variables were shown to be significantly correlated with the dependent variable at the five percent level. In other words, on the basis of only three of the 10 selected variables was it possible to differentiate between farm operators who were willing to leave farming for non-farm employment (potential migrant) and those who were unwilling. The three variables were (1) attitude towards farm and non-farm occupations, (2) knowledge of job opportunities, (3) size of farming operations. The other independent variables showed only weak relationships with the dependent variable. These were not statistically significant (at the five percent level). This suggested a high intercorrelation among the independent variables. Only directional inferences could be drawn from the relationships of these variables.



## Interrelationships Between Selected Pairs of Variables

In formulating this study it was recognized that several of the selected variables might be highly intercorrelated. Accordingly, an important objective of the study was to examine some of these interrelationships and the consequent indirect influence on the dependent variable or farm operator's willingness to leave farming. In this section this aspect of the analysis is investigated.

Age was found to be highly correlated with education. The cross-classification of these two variables showed that younger farm operators, 15 - 34 years of age, all had five years or more of formal schooling (Table 33). Fifty-three percent had between 9 and 11 years of schooling. On the other hand, 51.2 percent of the operators over 50 years of age had four years or less of formal schooling. Only 9.8 percent had attended school for more than nine years. The chi-square of 56.3094 was statistically significant at 0.005 level or beyond (d.f. = 4,  $p < 0.005$ ).

TABLE 33

AGE OF OPERATOR AND NUMBER OF YEARS SCHOOLING COMPLETED,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Age of Operator	Number of years schooling completed							
	0 - 4		5 - 8		9 and over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
15 - 34	0	0.0	17	47.2	19	52.8	36	100.0
35 - 49	3	4.5	43	64.2	21	31.3	67	100.0
50 and over	21	51.2	16	39.0	4	9.8	41	100.0
Total	24	16.7	76	52.8	44	30.6	144	100.0

$$\chi^2 = 56.3094 \quad \text{d.f.} = 4 \quad C = 0.5302 \quad \text{level of significance} < 0.005$$

Levels of living scores were significantly correlated with education. Of those farm operators with nine years and more of schooling, 44





percent had high level of living scores (12 - 17). Only 7.0 percent of this group had low scores (0 - 5). Compared to these operators, a relatively smaller percentage of those with low levels of education (0 - 4 years) had high levels of living scores and an almost equal percentage of these had low and medium level of living scores. The chi-square in this case was 14.544 and was significant at 0.005 level or beyond (d.f. = 3,  $p < 0.005$ ).

A high correlation was found between age and certain economic factors, investment in land, total cash income and net farm income. When examined in association with investment in land (measured by total acres operated), it was found that a higher percentage (25 percent) of operators in the 15 - 34 age group had farms of 561 acres or bigger. Only 4.9 percent of the older operators (50 years and over) operated farms of this size. Conversely, a higher percentage of these older operators had higher net farm incomes than younger operators. When cash returns from farming were considered, however, a higher proportion of the younger operators received higher cash returns from farming. Evidently, younger operators grossed higher returns but were more indebted. Older farm operators had sufficient time to pay off their debts and were more concerned with achieving a higher equity in the farm business. Net returns, therefore, to these older operators were higher than for the younger men who had relatively fewer years in farming and higher capital expenses.

The basic conclusion up to this point is that younger farm operators had achieved a more satisfactory economic position on the farms than had the older operators. The younger farmers operated bigger farms, they had higher returns to labour, and they were less willing to leave farming. It was evident from the data that they were more successful farmers. A possible explanation for the overall success of the younger men was provided by the examination of the interrelationships between the





education of these farm operators and some other characteristics.

It was evident that younger farm operators had the advantage of more years of schooling than older operators, particularly those 50 years and over. This relative advantage enabled the younger men to become better farm operators but did not provide them with quite enough education to encourage them to migrate from the farms and to compete successfully for good non-farm jobs. This conclusion was well demonstrated by more than one of these operators who pointed out, with satisfaction, to the income they were making from farming. These operators suggested that they could not hope to gain such remunerations from non-farm jobs with their present levels of education.

A higher percentage of the younger farm operators had bigger farms than the older operators. Of those operating farms 561 acres and bigger, 42.9 percent were operators with nine years or more of schooling, only 3.6 percent of these had four years or less. A further indication of the managerial potential and capacity of these operators was provided by the extent to which they utilized farm credit. Fifty-four percent of the operators with \$5,000 and more credit were operators who had nine years and more schooling. Only 9.1 percent of these operators had four years or less schooling (Table 34). This offers an explanation for the low correlation between equity and operators' willingness to leave farming, referred to in the previous analysis. The younger and better educated farmers were the ones with lower equities. They were also the more successful farmers and those less willing to migrate from the farms.





TABLE 34

NUMBER OF YEARS SCHOOLING COMPLETED AND FARM DEBTS,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

No. of years of schooling completed by Operators	Farm Debts							
	Under \$2,000		\$2,000-\$4,999		\$5,000 and over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 4	19	20.7	3	10.0	2	9.1	24	16.6
5 - 8	49	53.3	19	63.3	8	36.4	76	52.8
9 and over	24	26.1	8	26.7	12	54.5	44	30.6
Total	92	100.0	30	100.0	22	100.0	144	100.0

$\chi^2 = 9.9084$  d.f. = 6 C = 0.2537 level of significance  $< 0.250$

Another economic factor significantly correlated with education was total cash farm income. Forty-one percent of the farm operators earning \$5,000 and over had nine years or more schooling compared to only 3.1 percent of this income group who had four years or less of schooling (Table 35).

TABLE 35

FARM OPERATORS' TOTAL CASH INCOME AND  
NUMBER OF YEARS SCHOOLING COMPLETED,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

No. of years schooling Completed	Total Cash Income									
	Under \$1200		\$1200-2499		\$2500-4999		\$5000 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
0 - 4	3	11.5	5	13.2	15	31.3	1	3.1	24	16.7
5 - 8	13	50.0	22	57.9	23	47.9	18	56.3	76	52.8
9 and over	10	38.5	11	28.9	10	20.8	13	40.6	44	30.5
Total	26	100.0	38	100.0	48	100.0	32	100.0	144	100.0

$\chi^2 = 13.9621$  d.f. = 6 C = 0.2973 level of significance  $< 0.050$



A positive correlation was also found between education and non-farm wages. In the Bonnyville District there was no indication that off-farm employment was undertaken by any particular group of farmers. Relatively better-off farmers, as well as very low income earners, undertook off-farm employment. However, there were some differences in the earning capacity of these operators. Of those operators with four years or less of formal schooling, 91.7 percent earned less than \$500 from off-farm employment, and 8.3 percent earned \$1,500 or more. On the other hand, 68.2 percent of the operators with nine years or more schooling earned less than \$500, and 22.7 percent earned \$1,500 or more.

### Conclusion

Education was evidently one of the most important factors influencing the economic positions of farmers in the Bonnyville District. It influenced the managerial ability of these farmers and determined their earning capacity. Furthermore, education directly or indirectly influenced farm operators' ability to participate in the social and economic activities of the society in which they lived and, consequently, their levels of living. Farm operators with better education found greater security and satisfaction in farming and expressed less willingness to leave the farms. Operators with lower levels of education were less secured and expressed a greater willingness to leave farming.

The results of the foregoing analysis supports the hypothesis of high intercorrelations between the social and economic variables. The previous analysis had revealed low correlations between most of the independent variables and the dependent variable. Examination of the relationships between pairs of independent variables show some significantly high





correlations at the 0.05 level. This interrelationship in turn had an indirect influence on the dependent variable or the farm operator's willingness to leave the farm.<sup>1</sup>

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<sup>1</sup>The interrelationship of the independent variables and the dependent variable was further investigated by the regression analysis method. This is discussed in Appendix I.



## VI. SUMMARY AND CONCLUSION

Agriculture was the mainstay of the economy of Census Division 12. In 1961 there were 4,494 farms, mostly mixed farms, with some emphasis on livestock. These farms were on the average one-third smaller than the provincial average of 615.5 acres. Approximately 40 percent of the population in Census Division 12 lived on farms compared with 21.6 percent for the province. Fifty-seven percent of these families earned less than \$2,500 from the sale of farm commodities in 1960 as compared to 20 percent for the province. Many heads of households undertook off-farm employment to supplement their low farm incomes. In the absence of alternative economic activities such opportunities were generally limited to a few unskilled and semi-skilled jobs in construction, road maintenance and a few trades.

During the post-war period migration has been taking place from the farms and small rural villages to the larger rural towns and urban centres. The rate of migration evidently had not been high enough to enable significant gains in terms of farm consolidation and income returns to accrue to those persons remaining in farming. Compared to the rest of the province, Census Division 12, in 1961, presented a spectacle of rural poverty and economic decay with a high level of unemployment and under-employment.

Analysis of the data collected from 144 farm families identified several characteristics of the farm families living on low productive farms in the Bonnyville Municipal District in 1965. These characteristics were not isolated but were highly interrelated. The majority of the farm operators were in the productive age group of 25 to 65 years old. Only 3.5 percent were under 25 years of age and 2.8 percent were 65 years or over





which demonstrates the selectivity process of migration. It was hypothesized that advanced age and low level of education acted as impediments to the mobility of low income farm operators. This was substantiated by the data which showed that a higher percentage of operators, 50 years and over, were willing to leave farming than younger operators but had been unable to do so. Eighty-four percent of those 50 years and over had four years or less formal schooling. This factor contributed to their failure in farming and was also a deterrent to occupational readjustment. Compared to these older men, the younger operators 15 to 34 years of age had at least five years of schooling, though none had reached Grade XII. They were more successful farm operators and had bigger farms and higher cash incomes. In spite of their relative advantage in farming these younger operators were at a relative disadvantage compared to urban workers. They were unable to compete successfully for non-farm jobs; furthermore, they were unable to earn as much from non-farm jobs as they were earning on the farms with their levels of education. In this case education was the major handicap and together with their relative success in farming explained the unwillingness of a higher proportion of younger operators to leave farming.

Lack of information on job opportunities and lack of alternative skills and training were major impediments to occupational mobility. There were no organized labour services in the Bonnyville District to provide information to rural workers about job opportunities. This reflected the absence of job creating activities. The fact that one out of every five operators had off-farm employment during 1963-64 demonstrated the need for some type of off-farm employment to supplement the meagre farm incomes. The jobs available generally required unskilled and semi-skilled labour and were usually on a part-time or seasonal basis. Lack of job





skills and alternative training prevented many operators from moving into permanent off-farm employment.

Strong attachment to farming was found to be a greater hindrance to off-farm migration than community ties. Fifty-six percent of the operators indicated personal preference for farming and of these 84 percent were unwilling to leave the farms. Weak community attachments and low levels of social participation reflected the absence of community organizations and community spirit. The pattern of early settlement which encouraged the establishment of small ethnic communities and the rivalry between religious groups contributed to social disassociation and disruption of community services and organizations. Only 8 percent of the farm operators were members of social clubs but 65 percent were members of co-operatives. However, patronage was low in the co-operatives thus weakening the successful operation of such economic organizations. A further weakening of social interaction in the small communities was brought about by the emigration of the younger men and women who were the potential community leaders.

Low levels of living standards in the Bonnyville District reflected the low incomes and cultural lags. The families in the Bonnyville District ranked lower than the rest of the province and the Canadian average measured in terms of (a) capital value per farm, (b) value of sales per farm, (c) number of farms reporting automobiles, (d) number of farms with electricity, (e) number of farms with telephones, and (f) number of farms with 10 or more books. There was no significant correlation between levels of living and willingness to leave farming. There was some indication, however, that operators with high and low levels of living scores were among those less willing to leave farming.





This suggested that families with high levels of living scores had achieved some satisfaction and security from farming; hence they did not feel the urgent need to pursue those goals in urban centres. On the other hand, families with low levels of living scores did not achieve this level of satisfaction. The heads of these households were also the operators with low levels of education and least prepared (technically and psychologically) for off-farm employment. This latter group was the "trapped" families who lacked the motivations to seek improved conditions elsewhere. They were forced through circumstances to remain on the farms which at least offered them immediate security.

Low levels of income serve as a popular index of poverty. However, it must be emphasized that low income is both a cause and a result of poverty. Examined by itself the low incomes demonstrate the low productivity of agriculture in the Bonnyville District, and the extent to which the area lagged behind the rest of the province. Thirty-four percent of the farm families had gross sales of farm products in 1964 of less than \$2,500 and 55 percent had grossed less than \$3,750--the poverty level more recently established by federal and provincial ARDA officials. The average capital investment per farm was \$27,000, approximately two-thirds the provincial average, and only slightly higher than the suggested average minimum of \$25,000 recommended by ARDA as the average minimum capitalization required for the development of an economic farm enterprise. When the above factors are considered together with the fact that the Bonnyville farms occupy much grey-wooded soils, then it is evident that larger farms and higher capital investment per farm are necessary to generate higher incomes.

Net family incomes provided a better indication of families' economic position. One out of every four families had net incomes under





\$1,000 and 45 percent had incomes under \$2,000. Only 12 percent had net family incomes over \$4,000. A substantial proportion of total net family income came from off-farm wages, government payments and other unearned incomes such as pensions and family allowances. Considered in the context of total earnings, 30 percent of total net family income came from agricultural subsidies and 36 percent of the total from non-farm sources. Total unearned incomes constituted 52.8 percent of total net family income. Transfer payments to such farm families raises a serious question concerning public policy. Many low income families on low productive farms would choose to leave farming for non-farm occupations. Such families unfortunately were debarred from doing so because of certain impediments. It is also evident that in many cases subsistence farm incomes have become a supplement to unearned incomes. In other words, such families are subsidized to remain on these marginal farms.

Forty-four percent of the Bonnyville families indicated willingness to leave farming for non-farm occupations. There were others who would be inclined to leave but the investigation concerned those willing to leave "for a non-farm job". Operators who considered themselves unable to make this transition because of advanced age or other handicaps responded negatively to this inquiry. Even if all of those indicating willingness to leave did not do so when presented with the actual choice, there would be a significant proportion who would accept the offer. This suggests a new direction for public policy and the question must be raised why should 44 percent of the population in the Bonnyville District remain and live under such unfortunate circumstances which initially had not been of their own choosing nor creation. They were trapped in a web of circumstances from which they were unable to untangle themselves without outside assistance.





Eighty-four percent of the operators considered that their farm incomes were insufficient to support their families adequately. Evidently economic motives were not the only important consideration involved in occupational mobility. This supports the conclusion that factors of a personal, occupational, social-psychological nature entered into the decision-making processes of farm families. It would seem, therefore, that in formulating remedial policies priority should be given to education and retraining to make these families more productive. Such policies would serve to remove many of the occupational and psychological handicaps. Low income families would then be in a position to choose where they could be most productive, on the farms or elsewhere; or they could then be more easily persuaded to change to a new environment or new occupations where they could be more productive.

The most obvious need and the key to greater productivity is education and retraining. Education emerged as the single most important factor and highly intercorrelated with other factors throughout the study. Operators with relatively higher levels of education were more productive and received higher incomes on and off the farms. The younger generation of farm children with higher education had successfully migrated from the farms into urban occupations. Older operators with fewer years of formal schooling not only had been unsuccessful in farming but had been unable to overcome the other social and psychological impediments. The children of low income families had successfully overcome the handicaps of their rural environment because of the advantages of having better education and preparation for the changing social and economic conditions in the more progressive urban society.





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## APPENDIX I

### PARAMETRIC STATISTICAL ANALYSIS

Chi-square analysis provides a useful tool for investigating the relationship of selected pairs of variables or a few variables. However, for predicting a criterion and to provide an indication of the accuracy of subsequent predictions using several variables, multiple regression analysis is a more useful technique. Further examination of the relationships between the independent and dependent variables was conducted using multiple regression analysis.

The first step in this analysis was to examine the simple correlation of twenty-two (22) variables, including the dependent variable. Four of these were found to be significantly correlated with the dependent variable at 0.05 level (Table A). It was inferred from the low correlations of the remaining variables that there was high intercorrelation which substantiated the main hypothesis. The three variables which were significantly correlated with the dependent variable concurred with earlier conclusions drawn from the chi-square analysis. Education, for example, was found to be inversely related to willingness to leave farming. It was also observed that the Ukrainians indicated greater willingness to leave farming than other ethnic groups. This was inferred from the significantly high correlation. Ethnic origin was not included in the original hypothesis but it was examined in the analysis.

A third variable which was found to be significantly correlated with the independent variable was the French. They indicated greater unwillingness to leave farming which was inferred from the negative correlation of  $-0.1784$  significant at 0.05 level.





Examination of the regression equations further supported the conclusions made from previous analyses. Identification of the independent variables which were significantly correlated with the dependent variable was on the basis of the "t" value and the significance of the regression equation was determined by the level of the "F" value. No independent variable was considered significant unless the "t" value was significant at 0.05 level or beyond. The result of the regression analysis at the significant level had an  $r^2$  of 17.49 which was not satisfactory for predictive purposes.

The regression analysis was investigated with the object of establishing an equation which could be used to predict the occupational mobility of the population from a low income farm area. The results of the analysis did not support a satisfactory application of this type of analysis. Furthermore, the results supported the contention that the investigation dealt with what might be considered a residual farm population in which differences in the personal characteristics are difficult to isolate. In other words the population might be considered as one from which migration had been taking place over an extended period. Those families which are today on the farms are either families unable to leave or families unwilling to leave. The differences in such a population, if any, could not be expected to be significant. This conclusion was further supported by the analysis of differences between the means of selected variables. This showed no significant differences (Table B).



TABLE A

SUMMARY OF SIMPLE CORRELATIONS OF 22 SELECTED INDEPENDENT VARIABLES.  
THE DEPENDENT VARIABLE IS WILLINGNESS TO  
LEAVE FARMING FOR NON-FARM OCCUPATION

Independent Variable	Simple Correlation
1. Farm operator's experience (in years)	+ 0.11082
2. Ethnic Origin - French	- 0.17841*
3. Ethnic Origin - Ukrainian	+ 0.21913*
4. Ethnic Origin - Polish	+ 0.15443
5. Ethnic Origin - British Isles	- 0.15702
6. Ethnic Origin - Other European	- 0.18001*
7. Farm Operator's Age	+ 0.09105
8. Number of Children	+ 0.00802
9. Farm Operator's years of schooling	- 0.17176*
10. Years of schooling of operator's wife	+ 0.02853
11. Investment in lands and buildings	- 0.00677
12. Level of living	- 0.07165
13. Investment in farm machinery and equipment	- 0.07901
14. Total improved acres operated in 1965	- 0.09499
15. Total acres operated in 1965	- 0.12906
16. Total investment in farm enterprise	- 0.06322
17. Total family debts	- 0.00374
18. Total cash income	- 0.14547
19. Net income from farming	- 0.06022
20. Off-farm wages	+ 0.10132
21. Total net family income	- 0.15107

\* significant at 0.05 level





TABLE B

ANALYSIS OF DIFFERENCES BETWEEN MEANS OF SELECTED FACTORS

Variables	Variable Averages		"z" Value
	Group I	Group II	
	Willing to leave farming for non-farm occupation	Unwilling to leave farming for non-farm occupation	
Number of years farming	20.05	17.42	1.32
Operator's age	44.5	42.5	1.05
Number of children	3.7	3.5	0.50
Operator's years of schooling	6.9	7.6	- 1.0
Years of schooling of operator's wife	7.8	8.3	- 0.959
Investment in lands & buildings	\$18,038	\$16,927	- 0.520
Investment in farm machinery and equipment	\$ 7,070	\$ 7,733	- 0.709
Total improved acres operated in 1965	256	288	- 0.127
Total acres operated in 1965	389.6	454.8	- 1.812
Family's debts in 1965	\$ 5,524	\$ 6,160	0.534
Total cash income from farming	\$ 3,544	\$ 4,140	- 0.906
Total net income from farming	\$ 1,319	\$ 1,319	- 0.003
Off-farm earnings of operators	\$ 1,635	\$ 1,468	0.406
Total net family income	\$ 2,207	\$ 2,756	- 1.519



## APPENDIX II

### AREA AND METHOD OF SAMPLE

The population sample was taken from Census Division 12 situated in the northeast of Alberta. Census Division 12 was the second largest of the 15 divisions in the province in 1961. It occupied 32,154,880 acres or 20 percent of the total provincial land mass. The total acreage farmed, however, was the third smallest in the province, representing only 5.8 percent of the total acreage farmed in the province. There were 4,494 farms in Census Division 12 in 1961 occupying only 4 percent of the total acreage and concentrated mostly in the southern part of the Division. The population was unevenly distributed with a high density in the south and very scattered in the north. In view of this type of distribution and the limited time and resources available, a random probability sampling technique was not considered the most feasible. The most reasonable plan appeared to be purposive sampling. The basic assumption behind such sampling technique is that "with good judgment and an appropriate strategy one can hand-pick the cases to be included in the sample and then develop samples that are satisfactory in relation to one's needs".<sup>1</sup>

Examination of census and other available historic data on the whole region enabled the selection of Bonnyville as an area representative of the region. A further consideration was the fact that earlier studies of a social and economic nature had been conducted in this area which provided useful information for comparison.

A purposive sample is a non-probability approach and clearly is subject to errors of judgment. To reduce the possible bias in the selec-

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<sup>1</sup>Selltiz, Research Methods in Social Relations, p. 520.





tion of the area it was decided to select the individual elements within the area on a probability basis so that each would have an equal chance of being selected. The survey design called for a random-systematic selection of each unit in the sample. Two types of questionnaires were used, labelled Schedule "C" and Schedule "D" and the following plan was carefully followed.

Survey Design for Bonnyville Municipal Division.

1. Schedule "C" was taken for each farm in the Bonnyville Municipal District, except T.62, R.6, W4th which had been surveyed the previous summer of 1964.
2. Schedule "D" was taken for 20 percent of the farms covered by Schedule "C".
3. In order to assure random selection of farms for Schedule "D", a pre-determined procedure was followed.
  - a. Each township (or fraction where part was outside the Municipal Division) was surveyed separately.
  - b. A number from one to five was chosen at random from each township. This gave the first farm for which Schedule "D" was taken, then every fifth farm until the township was completed. For example, if number 3 was drawn, the other numbers were 8, 13, 18, etc.
  - c. The survey always began at the northwest corner of the township, working south and east in a serpentine fashion as shown in the diagram, with southward movement taking precedence over eastward movement.
  - d. Where the township was divided by a natural barrier, the north and west portions were taken first (depending on directional orientation of the barrier).



- e. Where farms were located directly across the road from each other, north took precedence over south on east-west roads; on north-south roads, west took precedence over east.
4. In each township the route to be followed was always plotted before the random number was chosen. Any modifications made necessary by unanticipated barriers followed the principles outlined under 3.
5. No alternatives were taken because of refusals, inability to contact or any other reason.

The use of non-probability sampling is approved by many research workers. In some cases such techniques are combined with a probability sampling. Selltitz supports the application of such analytical methods in the paragraph which follows:

One way of looking at this kind of design is to regard the "typical" counties as defining a population. If a probability sample of this population is taken, the mathematical theory of probability sampling is completely applicable, and one can state the probable limits of error in the relation of the sample results to the true population values. One can then generalize the inferences regarding this restricted population to the national population, subject to the assumption that the "typical" counties are still "typical" of their respective states.

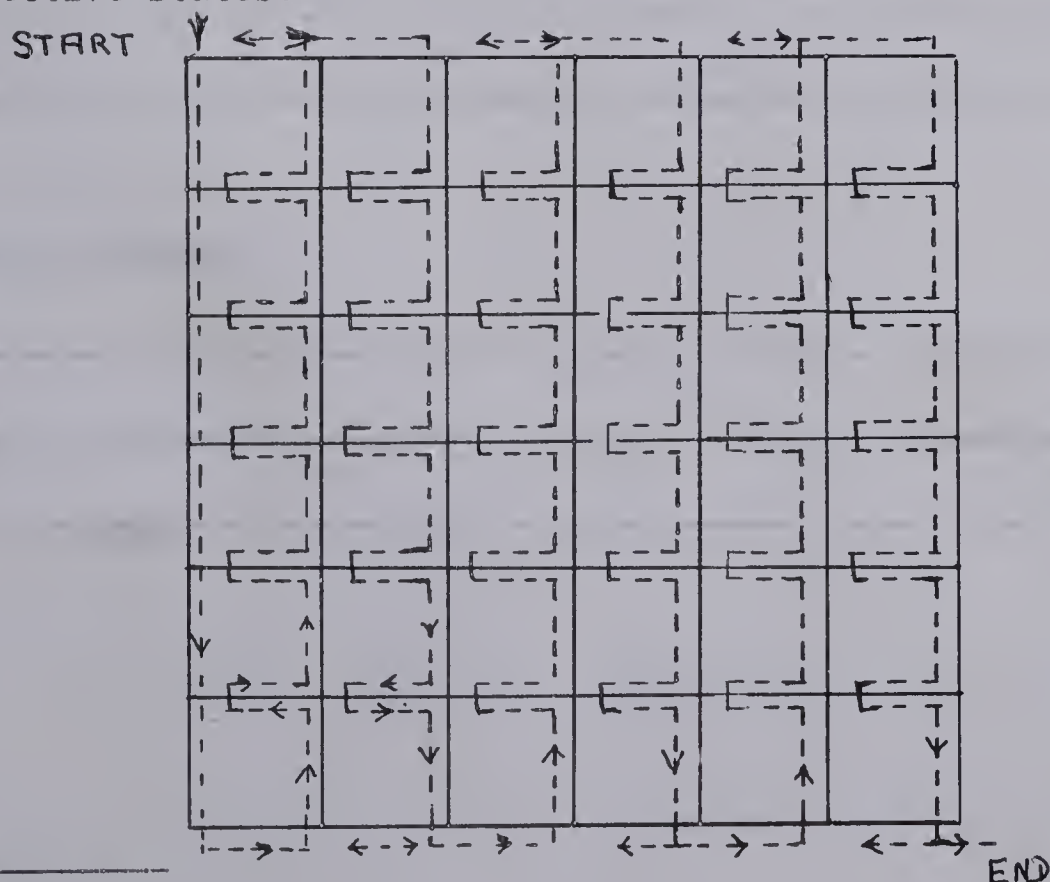


FIGURE 2  
SURVEY ROUTE  
FOR TOWNSHIPS





Schedule C

CONFIDENTIAL

Farm Income and Population Study  
Department of Agricultural Economics  
University of Alberta  
Edmonton

Q. No. \_\_\_\_\_

\_\_\_\_\_  
Name of Operator \_\_\_\_\_ Address \_\_\_\_\_

Interviewer \_\_\_\_\_ Date \_\_\_\_\_

Legal Description of Farm (List all areas operated beginning with headquarters):

Legal Description					Who operated it in*		1965	
Q(s)	S	T	R	W of	1951	1961	Tenure**	Acres

a. \_\_\_\_\_

\* Give acreage if less than amount in last column                      Total

\*\* (1) if owned, (2) rented or leased, (3) managed for others

Present status and address of former operators listed above

Name	Year Left	Present Status	Last Known Address
------	--------------	----------------	--------------------

(1) \_\_\_\_\_

(2) \_\_\_\_\_

(3) \_\_\_\_\_

Interviewer's Comments:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



Schedule D

CONFIDENTIAL

Farm Income and Population Study

Q.No.

Department of Agricultural Economics  
University of Alberta  
Edmonton

1. When did you first become a farm operator? \_\_\_\_\_  
(year)
2. How long have you been a farm operator? \_\_\_\_\_  
(year)
3. Were you raised on a farm? \_\_\_\_\_
4. What is the ethnic or national origin of your father? \_\_\_\_\_  
mother? \_\_\_\_\_

5. Are you a member of a

<u>Type of Organization</u>	<u>Name of Organization</u>	<u>Position*</u>	<u>Activity*</u>
-----------------------------	-----------------------------	------------------	------------------

- |                          |       |  |  |
|--------------------------|-------|--|--|
| A. Church                | _____ |  |  |
| B. Political Party       | _____ |  |  |
| C. Farm Organization     | _____ |  |  |
| D. Co-operative (patron) | _____ |  |  |

\* (1) member only, (2) committee member, (3) officer

\*\* (1) regularly, (2) occasionally, (3) seldom attend meetings (or  
patronize co-op)

6. In what year were you born? \_\_\_\_\_

If reluctant to answer, how old were you in 1961:

Under 25\_\_\_\_, 25-29\_\_\_\_, 30-34\_\_\_\_, 35-39\_\_\_\_, 40-44\_\_\_\_,  
45-49\_\_\_\_, 50-54\_\_\_\_, 55-59\_\_\_\_, 60-64\_\_\_\_, 65 or over\_\_\_\_\_.

7. How many children do you have? \_\_\_\_\_

Please list in order of age:

Name	Sex	Year Born	Years of School	Occupation or status*	Place of residence
------	-----	--------------	--------------------	--------------------------	-----------------------

\* if deceased, age at death.





8. What was the last grade you completed in school? \_\_\_\_\_ Univ? \_\_\_\_\_

9. What was the last grade your wife completed in school? \_\_\_\_\_ Univ? \_\_\_\_\_

10. What additional training have you had?

A. Operator	Type of Training	Years Comp.
-------------	------------------	----------------

(1) Apprentice or practical	_____	_____
--------------------------------	-------	-------

(2) Vocational	_____	_____
----------------	-------	-------

(3) Other	_____	_____
-----------	-------	-------

B. Your wife

(1) Apprentice or practical	_____	_____
--------------------------------	-------	-------

(2) Vocational	_____	_____
----------------	-------	-------

(3) Other	_____	_____
-----------	-------	-------

11. Were you employed off your farm any time during 1962-64? \_\_\_\_\_

A. (If so),

(1) type of employment or business	(2) type of work done
------------------------------------	-----------------------

(3) average days per year	(4) average hours per day worked
---------------------------	-------------------------------------

B. (If not),

(1) did not want off farm work? \_\_\_\_\_

(If he did),

(a) part time or full time	(b) did you actively seek work?
----------------------------	---------------------------------

(c) explain how \_\_\_\_\_

(2) do you know of any off farm opportunities in this community? \_\_\_\_\_

(If not),

(a) how far would a person have to go to find part-time off  
farm employment? \_\_\_\_\_

(b) how far would a person have to go to find full-time off  
farm employment? \_\_\_\_\_



12. Was your wife employed off your farm any time during 1962-64? \_\_\_\_\_

A. (If so),

(1) type of employment or business (2) type of work done

(3) average days per year (4) average hours per day  
worked

B. (If not),

(1) did she want off farm work? \_\_\_\_\_

(If she did),

(a) part time or full time? (b) did she actively seek work?

(c) explain how \_\_\_\_\_

13. If you wanted off farm work where would you go to get information on job opportunities? \_\_\_\_\_

14. Would you be willing to leave the farm if you could get a good full time job? \_\_\_\_\_

(If yes),

(1) How much income would be required to get you to leave? \_\_\_\_\_

(2) Would you be willing to leave the community for such a job? \_\_\_\_\_

(3) Would you need financial assistance to move? \_\_\_\_\_

(If so), to what extent? \_\_\_\_\_

15. If you had a free choice, what kind of work (including farming) would you choose? \_\_\_\_\_

A. Why? \_\_\_\_\_

B. (If non-farm), what additional training do you think you would need for such work? \_\_\_\_\_

C. (If training needed), would you need financial assistance to complete such training? \_\_\_\_\_

16. Do you feel that your farm returns (on the average) an income sufficient to support your family adequately? \_\_\_\_\_

(If not), is it because of \_\_\_\_\_

(1) not enough land? (2) not enough capital?

(3) not enough labour? (4) other reasons (specify)





17. What is the age and size of the house you live in?

- |                    |                         |
|--------------------|-------------------------|
| A. age             | C. type of construction |
| B. number of rooms | D. general condition    |

18. Do you have in your house

- |                         |   |
|-------------------------|---|
| A. Electricity          | H. television                           |
| B. telephone (how many) | I. refrigerator                         |
| C. running water        | J. deep freeze                          |
| D. indoor bath          | K. power washer                         |
| E. hot-water heater     | L. magazine subscriptions (number)      |
| F. central heating      | M. newspaper (daily or weekly)          |
| G. radio (number)       | N. books (10 or more, other than texts) |

19. Did you have on your farm on May 1, 1965

	<u>Description (if needed)</u>	<u>Number</u>	<u>Value</u>
A. automobile	F. threshing machine		
B. truck	G. pick up baler		
C. tractor	H. forage crop harvester		
D. grain combine	I. electric motors (1/3 h.p. or over)		
E. swather	J. other machinery and equipment		

20. How were you using your land in 1951, 1961 and 1965?

- A. Crop land sown or to be sown for harvest (include area sown for hay, ensilage, and seed)
- B. Improved land for pasture or grazing (exclude hay, ensilage, and seed)
- C. Summer fallow
- D. Other improved land (barnyards, lanes, home gardens, idle land, etc.)
- E. Total improved acres (a,b,c and d)
- F. Woodland (woodlots, bush, windbreaks, cut-over land, etc.)
- G. Other unimproved land (unimproved hay land, native pasture, sloughs, etc.)



H. total acres operated

21. What is your estimate of the present market value of the land and buildings on this holding? \_\_\_\_\_

22. Did you have any livestock on this farm on May 1, 1965? \_\_\_\_\_

	<u>Number</u>	<u>Value</u>
A. Cattle and calves? _____	XXXXXX	XXXXX
(1) calves under 1 year _____		
(2) steers, 1 yr. and over _____		
(3) bulls, 1 yr. and over _____		
(4) heifers, 1 yr. and under 2 _____		
(5) cows & heifers, 2 yrs. & over (for beef) _____		
(6) cows & heifers, 2 yrs. & over (for milk) _____		
Total cows and calves		

	<u>Number</u>	<u>Value</u>
B. Pigs and hogs? _____	XXXXXX	XXXXX
(1) pigs, under 6 mos. _____		
(2) all other _____		
Total pigs and hogs		

C. Horses and ponies

D. Goats and sheeh

E. Poultry? \_\_\_\_\_

(1) chicks, under 2 mos.	(4) turkeys
(2) hens & pullets (for laying)	(5) geese and ducks
(3) all other chickens	
Total poultry	





23. Did you have any debt on May 1, 1965? \_\_\_\_\_

(if yes),

Type or purpose	Source(s)	Term	Year Borrowed	Amount Borrowed	Amount Outstanding
(1) Land	_____				
(2) Buildings				(5) Personal	
(3) Machinery				(6) Other	
(4) Farm operation					

24. What were your income and expenses in 1964? \_\_\_\_\_

Item	Quantity Sold	Cash Sales Or Value
_____		
_____		

A. Crops

- |            |                 |
|------------|-----------------|
| (1) wheat  | (3) oats        |
| (2) barley | (4) other crops |

B. Livestock and Livestock Products

- |                       |                                   |
|-----------------------|-----------------------------------|
| (1) cattle and calves | (4) eggs                          |
| (2) pigs and hogs     | (5) milk and cream                |
| (3) poultry           | (6) other livestock &<br>products |

C. Supplementary payments (efficiency payments, crop insurance, co-op dividends, etc.)

TOTAL CASH INCOME

D. Income in kind

TOTAL GROSS INCOME FROM FARMING

E. Operating expenses (including depreciation).

- (1) fertilizer purchased

F. Wage and salary income (operator)

G. Wage and salary income (other family members)

H. Rental income (including royalties)



I. Net income from other business

J. Pensions, family allowances, and other unearned incomes

K. Other income

TOTAL NET FAMILY INCOME





## APPENDIX III

### DEFINITIONS OF LOW-INCOME AND POVERTY

The problem of poverty is often confused. Contributing to this confusion is the lack of a generally workable definition. There are many variables involved in poverty and one of the most frequently used to define the subject is family or per person earnings. These statistics unfortunately cannot by themselves provide an accurate picture of the squalor and impoverishment that is poverty.

The 1961 Census of Canada bases its definition of low-income and non-commercial farms or poor farm operators on the gross value of products sold off the farms. According to this definition a low-income or non-commercial farm is one with less than \$1200 total sales during the preceding year. The definition employed by the Agricultural Rehabilitation and Development Administration (ARDA) uses \$2,500 gross sales of farm products. There are two added provisions, (a) that the farm operator did not work off the farm more than 25 days, and (b) that such farms should have less than \$25,000 capitalization. This was considered as the average minimum capitalization required for the development of an economic enterprise and \$2,500 represented about half the national average income from the sales of farm products.

Poverty is not confined to the farms and it was recognized that the rural non-farm generally required a higher income than the farm family since the non-farm family usually purchased most of the things they consumed. ARDA defined rural non-farm families earning less than \$3,000 as poor. As a final indicator of low-incomes in rural areas, ARDA added to the low-income category rural male workers earning less than



\$2,000 gross income per annum.

The statistics on income provide the most popular criterion of poverty and therefore it is important to recognize what this criterion means. Low-income as defined above is not a minimum income, neither is it the Malthusian subsistence wage level, rather it is considered an income which is not high enough to allow people to live according to normally accepted Canadian standards, not quite so low to bring about starvation, "nor quite low enough to die quickly without complication".<sup>1</sup>

These definitions generally tend to underestimate the cost of living requirements of rural families. One consideration here is that these figures have not been readjusted along with the inflationary trends of prices. Perhaps more important, however, the figures were not initially derived from an itemized budget of rural family requirements and underestimate the required income levels. In 1950 the Toronto Welfare Council Budget estimated the expenditures necessary for a family of five to provide a "subsistent" or "minimum" level of living. Based on 1950 prices this budget required an annual income of approximately \$2,652. A second budget (City Workers' Family Budget) estimated that based on 1950 prices in Toronto, it required to maintain a city family of four an annual income of \$3,848. The Royal Commission on Agriculture and Rural Life estimated that the requirements of a farm family in Saskatchewan in 1956 to maintain itself on an adequate living level would be somewhere between these two urban estimates of \$2,652 and \$3,848.<sup>2</sup>

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<sup>1</sup>"Rural Poverty: What Can ARDA Do?" Canadian Association For Adult Education, Pamphlet No. 1, Nov. 1964, pp. 1-2.

<sup>2</sup>These figures were quoted by the Royal Commission on Agriculture and Rural Life, "Movement of Farm People", No. 7, (Regina, Saskatchewan, 1956), p. 25.





The prices of consumer goods and inputs used by farmers have inflated considerably since 1950. Between 1950 and 1960 the price index of commodities and services used by farmers increased from 210.4 to 247.7 points. On the other hand, the index of prices of farm products decreased from 260.8 to 239.4 in the same period.<sup>1</sup> Using the figures above, therefore, represents a gross underestimation of the extent of the low-income farm problem in 1965. Conversely if these figures were adjusted the number of farms and farm families reported by ARDA and the Census in the low-income category would be greatly increased, and the poverty problem would be shown in its more serious perspective. Recently recognition was given to this misrepresentation of the extent of rural poverty by the federal and provincial ARDA officials. It was agreed to readjust the poverty line from \$2,500 to \$3,750 farm cash incomes from the sales of agricultural commodities.

To assess and characterize poverty by these bare statistics is to misrepresent the case of the poor. For short periods people can have low incomes without the attendant adversities of poverty. It takes a long time for families to sink into the ghettos of poverty or to be absorbed by the sub-culture and to be alienated by the rest of society. The marks of poverty run deep and are reflected in the dress, language, insecurity and other complexities of the individuals. Poverty means moval and spiritual decay, people lose their motivations and become helpless, hopeless pessimists. These are some of the things the statistics and simple definitions cannot define. In looking at these statistics it is necessary to read between the lines to see these human indignities.

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<sup>1</sup>Canada, Dominion Bureau of Statistics, Ottawa, No. 62-004, 1961.



APPENDIX IV

SUPPORTING STATISTICAL DATA

TABLE I

LOW-INCOME FARM FAMILIES

Province	Total Number of Farm Families less Residential & Institutional Farmers	Total Number of Low Income Farm Families	Percentage of Low Income Farm Families
Newfoundland	1,080	348	32
Prince Edward Is.	6,483	2,317	36
Nova Scotia	9,490	2,021	32
New Brunswick	9,205	3,008	33
Atlantic Total	26,258	8,694	33
Quebec	84,635	24,327	29
Ontario	109,636	17,868	16
Manitoba	40,847	10,190	25
Saskatchewan	91,076	18,838	21
Alberta	68,438	13,103	19
British Columbia	15,695	2,390	15
Western Total	216,056	44,521	20
Canada	436,225	95,410	22

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.





TABLE II

LOW EDUCATION LEVELS

Province	Total Rural Population of School Age and Over not Attending School	Total with Grade 4 or Less	Percentage of Low Education
Newfoundland	129,348	48,828	38
Prince Edward Is.	43,405	5,930	14
Nova Scotia	198,896	27,877	14
New Brunswick	181,792	45,473	25
Atlantic Total	553,441	128,108	23
Quebec	785,029	218,397	28
Ontario	855,905	113,111	13
Manitoba	199,047	44,207	22
Saskatchewan	329,444	63,473	19
Alberta	291,507	50,745	17
British Columbia	271,885	38,525	14
Western Total	1,091,883	196,950	18
Canada	3,286,258	656,566	20

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.



TABLE III

LOW NON-FARM FAMILY INCOMES

Province	Total Rural Non-Farm Families	Total With Income Below \$3,000 a Year	Percentage of Low Income Families
Newfoundland	42,305	29,350	69
Prince Edward Is.	6,898	4,003	58
Nova Scotia	57,557	30,506	53
New Brunswick	49,188	27,194	55
Atlantic Total	155,948	91,053	58
Quebec	144,110	68,563	48
Ontario	186,961	58,279	31
Manitoba	31,709	15,224	48
Saskatchewan	47,615	23,049	48
Alberta	39,797	15,433	39
British Columbia	79,187	22,748	29
Western Total	198,308	76,454	38
Canada	685,327	294,249	43

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.





TABLE IV

POPULATION, RURAL AND URBAN, CENSUS DIVISION 12, ALBERTA  
AND CANADA, 1961

Population	Census Division 12 (Number) (Percent)		Alberta (Percent) Excluding Total Cities		Alberta (Percent) Excluding Total Cities	
Total	47,310	100%	100%	100%	100%	100%
Rural Farm	18,614	39.4	21.4	39.3	11.4	20.1
Rural Non-farm <sup>a</sup>	18,837	39.8	15.3	27.9	19.0	33.6
Urban <sup>b</sup>	9,859	20.8	63.3	32.8	69.6	46.3

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.

<sup>a</sup>Living in settlements under 1,000 population

<sup>b</sup>Living in towns and villages of 1,000 and over.

TABLE V

ANNUAL RATE OF POPULATION CHANGE, CENSUS DIVISION 12,  
ALBERTA AND CANADA, 1951-1961

Population Segment	Period	Census Division 12		Alberta	Canada
		Total Change in 5 years	Percentage Change per year	Percentage Change per year	Percentage Change per year
Total	1951-56	+5061	+2.4%	+3.6%	+2.8%
	1956-61 <sup>a</sup>	+2363	+1.0	+3.5	+2.6
Farm	1951-56	-2842	-2.0%	-0.8%	-1.0%
	1956-61 <sup>a</sup>	-5082	-4.6	-2.0	-2.8
Non-farm	1951-56	+7903	+10.1%	+5.8%	+3.7%
	1956-61 <sup>a</sup>	+7445	+ 6.4	+5.5	+3.5

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.

<sup>a</sup>Excludes change due to redefinition of farms.



TABLE VI

POPULATION BY ETHNIC ORIGIN AND USE OF OFFICIAL LANGUAGE, 1961

Ethnic Origin	Northeast	Alberta			Canada		
	(C.D. 12)	Farm	Total	Urban	Farm	Total	Urban
			Rural			Rural	
(Number per 1000 Population)							
British Isles	211	344	366	502	361	461	468
French	247	68	74	56	326	318	297
German & Austrian	54	183	166	140	106	78	57
Other Western Europe	15	54	49	55	48	39	52
Polish	42	38	33	29	20	14	19
Scandinavian	42	96	90	62	35	28	18
Ukrainian	230	115	100	67	48	30	24
Other European	28	65	58	60	42	32	57
Indian (& Eskimo)	117	18	53	3	7	35	22
Other	16	9	11	26	7	11	24
<u>Use of Official Language</u>							
English only	745	936	930	949	671	678	672
French only	28	8	7	2	265	230	174
English & French	177	44	45	41	57	79	141
Neither English nor French	50	12	18	8	7	13	13

Source: Canada, Dominion Bureau of Statistics, Census of Canada,  
Bulletin 1.2-5 and 9, 1961.

TABLE VII

ETHNIC ORIGIN AS REPORTED BY 144 FARM  
OPERATORS, BONNYVILLE MUNICIPAL  
DISTRICT, 1965

	Farm Operators Reporting	
	Number	Percent
French	42	29.2
Ukrainian	35	24.3
Polish	26	18.1
British Isles	17	11.8
Other European	11	7.5
German	4	2.8
Russian	3	2.1
Austrian	2	1.4
Czech and Slovak	2	1.4
Others	2	1.4
Total	144	100.0





TABLE VIII

POPULATION BY RELIGIOUS AFFILIATION, 1961

	Census Division 12	Alberta	Canada
(Number per 1000 persons)			
Anglican Church of Canada	61	118	132
Baptist	16	32	33
Greek Orthodox	128	36	13
Lutheran	24	92	36
Pentecostal	12	11	8
Roman Catholic	469	224	457
Ukrainian (Greek) Catholic	69	26	10
United Church of Canada	179	314	201
Other	42	147	110

Source: Canada, Dominion Bureau of Statistics, Census of Canada,  
Bulletin 1, 2-6, 1961.

TABLE IX

RELIGIOUS AFFILIATION REPORTED BY FARM OPERATORS  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Religion	Number of Operators Reporting	Percent of Operators Reporting
Roman Catholic	76	52.8
United Church of Canada	25	17.4
Greek Orthodox	14	9.7
Ukrainian Greek Catholic	7	4.7
Pentecostal	6	4.2
Unaffiliated	5	3.5
Lutheran	4	2.8
Others	7	4.9
Total	144	100.0



TABLE X

REGULAR SUBSCRIPTION TO MAGAZINES REPORTED BY FARM OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1965.

Number of Magazines	Number of Operators	Percent Operators
0	27	18.7
1	31	21.5
2	43	29.9
3 or more	43	29.9
Total	144	100.0

TABLE XI

NUMBER OF CHILDREN REPORTED BY PRESENT FARM FAMILIES, 1965

Number of Children	Farm Families Reporting	
	Number	Percent
0	26	18.1
1 - 2	30	20.8
3 - 4	40	27.8
5 - 6	29	20.1
7 - 8	10	6.9
9 - 10	6	4.2
11 and over	3	2.1
Total	144	100.0
Total number of families with children	118	
Total number of children	517	
Average number of children per family	4.4	





TABLE XII

AGE DISTRIBUTION OF CHILDREN WHO HAD LEFT HOME, 1965

Age Group	Children away from Home	
	Number	Percent
Under 10	1	0.8
10 - 15	2	1.5
16 - 20	34	25.4
21 - 25	44	32.8
26 - 30	28	20.9
31 - 35	17	12.7
36 - 40	5	3.7
Over 40	3	2.2
Total	134	100.0

TABLE XIII

YEARS OF SCHOOL COMPLETED BY CHILDREN WHO HAD LEFT SCHOOL  
AND LIVING ON FARM AND AWAY FROM FARM, 1965

Years of Schooling	Children who completed Schooling	
	Living on Farm	Away from Farm
4 and under	1	3
5 - 6	4	3
7 - 8	7	21
9 - 10	3 <sup>a</sup>	33
11 - 12	3	44
Over 12	0	20
Total	18 <sup>b</sup>	124

<sup>a</sup>These three completed Grade 11 only

<sup>b</sup>Eight of these lived on parents' farms



TABLE XIV

NUMBER AND RESIDENCE OF CHILDREN OF PRESENT  
FARM FAMILIES, 1965

Residence	Number		
	Total	Male	Female
Home on farm with parents	375	211	164
Another farm in district	10	4	6
Farming out of Province	2	1	1
Small town	65	27	38
Small town - out of Province	8	7	1
City	33	18	15
City - out of Province	13	4	9
Total	506	272	234

TABLE XV

REPORTED NON-FARM OCCUPATIONS OF CHILDREN WHO HAD  
LEFT THE FARMS, 1965

Occupation	Children away from Farms	
	Number	Percent
Housewives	25	20.2
Attending urban school	14	11.4
Teachers	12	9.7
Labourers	6	4.8
Telephone and Telegraph Operators	6	4.8
Orderly and Nursing Aides	6	4.8
Sick or Disabled	4	3.2
Nurses	4	3.2
Technicians	3	2.4
Mechanics and Repairmen	3	2.4
Bakers and Food Processing	3	2.4
Other Occupations	13	10.5
Unknown	25	20.2
Total	124	100.0





TABLE XVI

AGE OF FARM OPERATORS, ALBERTA CENSUS DIVISION 12, 1961

Age of Operators	Alberta	Census Division 12
	(Percent of all Operators)	
Under 25	3.2	3.9
25 - 34	16.2	18.7
35 - 44	25.5	27.6
45 - 54	25.6	24.8
55 - 59	11.5	11.5
60 - 64	8.3	7.2
65 - 69	5.1	3.6
70 and up	4.6	2.7

Source: Canada, Census of Canada, Vol. V, Agricultural Bull. 5, 3-3:  
Alberta, 1961.

TABLE XVII

LABOUR FORCE, 15 YEARS AND OVER, BY OCCUPATION, 1961

	North- east	Census Division 12	Alberta	Canada
	(Total)	(Number per 1000 persons in labour force)		
Total	15728	1000	1000	1000
Farmers and farm workers	7256	461	206	100
Total non-farm occupations	8472	539	792	900
Managerial	728	86	104	83
Professional and technical	955	113	116	97
Clerical	489	58	138	129
Sales	374	44	79	63
Services and recreation	2742	324	147	123
Transportation and communication	535	63	70	61
Loggers, fishermen, trappers and hunters	356	42	7	6
Miners and related workers	18	2	13	10
Craftsmen, production and related workers	1375	162	209	241
Labourers	446	53	49	49
Not stated	454	54	68	26

Source: Canada, Dominion Bureau of Statistics, Census of Canada, 1961.



TABLE XVIII

PART-TIME OCCUPATIONS OF FARM OPERATORS, 1961

Kind of Off-Farm Work Reported	Census Division 12	Alberta	Canada
	(Number per 1000 reporting)		
Agriculture	125	153	133
Forestry	109	86	127
Fishermen or trappers	49	12	16
Construction work	264	202	178
Truck or bus driver	121	130	98
Factory production	21	27	77
Clerical	24	27	26
Other and not stated	362	433	416

Source: Canada, Census of Canada, Vol. V, Agriculture Bull. 5, 3-3;  
Alberta, 1961.

TABLE XIX

FARMS REPORTING SALES OF CERTAIN PRODUCTS  
ALBERTA AND CENSUS DIVISION 12, 1961

Product Sold	Alberta	Census Division 12
<u>Field Crops</u>	(Percent of all farms)	
Wheat	60.2	68.3
Other cash grain	46.5	35.5
Oil seeds	11.6	3.6
Hay, Fodder	10.2	4.7
Potatoes, etc.	2.8	1.2
Other Field Crops	48.0	44.3
<u>Livestock</u>		
Cattle	68.4	69.3
Pigs	50.5	67.4
Sheep	4.3	5.3
Horses	5.8	5.9
<u>Other</u>		
Dairy Products	39.2	49.1
Eggs	18.0	18.2
Wool	3.1	2.8
Hay, etc.	0.4	0.4
Fur - animals	0.4	1.6
Forest Products	0.6	0.6

Source: Canada, Census of Canada, Vol. V, Agriculture Bull. 5, 3-3;  
Alberta, 1961.





TABLE XX

FARM SIZE DISTRIBUTION, ALBERTA AND CENSUS DIVISION 12, 1961

Farm Size Class	Alberta	Census Division 12
	(Percent of all Farms)	
<u>By Acreage</u>		
under 10 acres	1.2	1.8
10 - 69 acres	2.5	2.5
70 - 239 acres	21.1	23.5
240 - 399 acres	26.5	31.6
400 - 559 acres	16.1	19.9
560 - 759 acres	11.5	11.3
760 - 1119 acres	10.2	7.0
1120 - 1599 acres	5.4	1.7
1600 -	5.5	0.5)
acres and up		0.2) 0.7
<u>By Value of Products Sold</u>		
\$25,000 up	2.7	0.1)
15,000 - 24,999	4.3)	0.4)
10,000 - 14,999	6.9)	1.7)
5,000 - 9,999	21.8)	11.4)
3,750 - 4,999	11.2)	11.1)
2,500 - 3,749	14.8)	17.7)
1,200 - 2,499	18.4)	25.1)
250 - 1,199:		
- part-time farms	5.2	7.8
- other small farms	8.1	15.3
Under \$250 - Residential farms	6.3	9.1
- Institutional farms	0.2	0.2

Source: Canada, Census of Canada, Vol. V, Agriculture Bull. 5, 3-3: Alberta, 1961.

TABLE XXI

FARM OPERATORS' RESPONSES TO THE QUESTION WOULD YOU BE WILLING TO LEAVE THE FARM IF YOU COULD GET A GOOD FULL TIME JOB?

Response	Operators Responding	
	Number	Percent
Yes	64	44.4
No	80	55.6
Total	144	100.0



TABLE XXII

FARM OPERATORS' RESPONSES TO THE QUESTION  
WOULD YOU LEAVE THE COMMUNITY FOR A  
NON-FARM JOB?

Response	Operators Responding	
	Number	Percent
Yes	56	87.5
No	6	9.4
Depends	2	3.1
Total	64	100.0

TABLE XXIII

FARM OPERATORS' RESPONSES TO THE QUESTION  
WOULD YOU NEED FINANCIAL ASSISTANCE TO  
MOVE?

Response	Operators Responding	
	Number	Percent
Yes	14	22.2
No	29	46.0
Depends	20	31.8
Total	63	100.0

TABLE XXIV

FARM OPERATORS' RESPONSES TO THE QUESTION, DO YOU THINK YOUR FARM  
INCOME IS ADEQUATE?

Response	Operators Responding	
	Number	Percent
No	121	84
Yes	23	16
Total	144	100





TABLE XXV

REASONS GIVEN FOR INADEQUATE FARM INCOME

Reasons	Operators Responding	
	Number	Percent
Not enough land	37	25.7
Not enough capital	73	50.7
Not enough labour	34	23.6
Total	144	100.0
<u>Other Reasons</u>		
High cost of machinery and low returns	63	
Poor land and soil conditions	24	
Unfavourable weather conditions	31	
Other reasons	13	
Poor health, old age	1	

TABLE XXVI

RESPONSES TO THE QUESTION, HOW FAR WOULD YOU HAVE TO GO TO  
OBTAIN FULL-TIME OR PART-TIME WORK?

Distance in Miles	Farm Operators Reporting			
	Part-Time		Full-Time	
	Number	Percent	Number	Percent
0 - 19	44	30.6	14	9.7
20 - 39	31	21.5	11	7.6
40 - 59	4	2.8	2	1.4
60 - 79	0	0.0	0	0.0
80 miles & over	23	15.9	68	47.3
Don't know	42	29.2	49	34.0
Total	144	100.0	144	100.0



TABLE XXVII

REGULAR SUBSCRIPTIONS TO NEWSPAPERS REPORTED BY FARM FAMILIES,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Number of Newspapers Received	Farm Families Reporting	
	Number	Percent
0	6	4.2
1	32	22.2
2 or more	106	73.6
Total	144	100.0

TABLE XXVIII

FARM FAMILIES REPORTING POSSESSION OF 10 OR MORE BOOKS  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Number of Books	Farm Families Reporting	
	Number	Percent
10 or more	100	69.4
less than 10	44	30.6
Total	144	100.0

TABLE XXIX

SUPPLEMENTARY PAYMENTS RECEIVED BY FARM OPERATORS, 1964

Payments	Farm Operators Reporting		
	Number	Percent	
Under \$100	11	8.8	
\$100 - \$199	21	16.8	
\$200 - \$299	23	18.4	
\$300 - \$399	13	10.4	
\$400 - \$499	10	8.0	
\$500 - \$599	19	15.2	
\$600 - \$699	8	6.4	
\$700 and over	20	16.0	
Total	125	100.0	
Minimum	\$30	Mean	\$408
Maximum	\$1,529	Mode	\$236

Percent of total number of families receiving supplementary payments = 86.8%





TABLE XXX

PENSIONS, FAMILY ALLOWANCES AND OTHER UNEARNED INCOME, 1964

Unearned Income	Number of Families	Percent
Under \$100	13	12.5
\$100 - \$199	25	24.0
\$200 - \$299	22	21.2
\$300 - \$399	16	15.4
\$400 - \$499	12	11.5
\$500 - \$599	5	4.8
\$600 - \$699	2	1.9
\$700 and over	9	8.7
Total	104	100.0
Maximum	\$1,500	
Minimum	\$ 10	
Mean	\$ 318	
Mode	\$ 177	

Percent of total number of families receiving non-farm incomes = 72.22%

TABLE XXXI

FARMERS' ESTIMATE OF INCOME IN KIND, 1964

Cash Estimate	Frequency	Percent
Under \$200	10	7.3
\$200 - \$399	22	15.9
\$400 - \$599	46	33.3
\$600 - \$799	32	23.3
\$800 - \$999	10	7.2
\$1,000 and over	18	13.0
Total	138	100.0



TABLE XXXII

OFF-FARM EARNINGS OF OPERATORS AND FAMILY EARNINGS, 1964

Earnings Group	Number of Operators	Other Members of Families
Under \$1,000	19	12
\$1,000 - \$1,999	9	3
\$2,000 - \$2,999	11	1
\$3,000 - \$3,999	3	1
\$4,000 - \$4,999	2	1
\$5,000 and over	1	1
	<u>45</u>	<u>20</u>
	<u>Operators</u>	<u>Other Family Members</u>
Minimum	\$ 24	\$ 100
Maximum	\$5,800	\$9,790
Average Earnings	\$1,557	\$1,399
Modal	\$ 168	
Percent of total number of operators receiving off-farm wages = 31.3%		

TABLE XXXIII

ETHNIC ORIGIN AND FARM OPERATORS' WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB, 1965

Ethnic Origin of Operators	Farm Operators' Willingness to Leave Farms					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
French	15	36.6	26	63.4	41	100.0
Ukrainian	22	64.7	12	35.3	34	100.0
Polish	13	54.2	11	45.8	24	100.0
British	3	18.8	13	81.2	16	100.0
Other European	6	25.0	18	75.0	24	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 15.4900 \quad \text{d.f.} = 4 \quad C = 0.3166 \quad \text{level of significance} < 0.005$$





TABLE XXXIV

NUMBER OF CHILDREN AND OPERATORS' WILLINGNESS TO  
LEAVE FARMING FOR A NON-FARM JOB, 1965

Number of Children in Family	Operator's Willingness to Leave Farm					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
1 - 3	30	39.0	47	61.0	77	55.4
4 - 8	25	47.2	28	52.8	53	38.1
9 and over	4	44.4	5	55.6	9	6.5
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 0.8816 \quad \text{d.f.} = 2 \quad C = 0.0794$$

TABLE XXXV

RELIGIOUS PREFERENCE AND OPERATORS' WILLINGNESS TO  
LEAVE FARMING FOR A NON-FARM JOB, 1965

Religious Preference of Operators	Operator's Willingness to Leave Farm					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
Roman Catholic	34	42.5	46	57.5	80	100.0
Protestants	14	37.8	23	62.2	37	100.0
Greek Orthodox	9	50.0	9	50.0	18	100.0
Others	2	50.0	2	50.0	4	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 0.8356 \quad \text{d.f.} = 3 \quad C = 0.0773$$



TABLE XXXVI

WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB  
AND TOTAL CASH FARM INCOME, 1965

Operators' Willingness to leave farming for a non-farm job	Under \$1,200		\$1,200 - \$2,499		Total Cash Farm Income \$2,500 - \$4,999		\$5,000 & over		Total	
	Number		Percent		Number		Percent		Number	
	Percent		Number		Percent		Number		Percent	
Yes	11	44.0	16	43.2	20	43.5	12	38.7	59	42.4
No	14	56.0	21	56.8	26	56.5	19	61.3	80	57.6
Total	25	100.0	37	100.0	46	100.0	31	100.0	139	100.0

$$\chi^2 = 0.2316$$

$$d.f. = 3$$

$$C = 0.0408$$

TABLE XXXVII

WILLINGNESS TO LEAVE FARMING FOR A NON-FARM JOB  
AND TOTAL NET FARM INCOME, 1965

Operators' Willingness to leave farming for a non-farm job	Under \$500		\$500 - \$1,499		Total Net Farm Income \$1,500 - \$2,499		\$2,500 & over		Total	
	Number		Percent		Number		Percent		Number	
	Percent		Number		Percent		Number		Percent	
Yes	19	41.3	21	56.8	10	34.5	9	33.3	59	42.4
No	27	58.7	16	43.2	19	65.5	18	66.7	80	57.6
Total	46	100.0	37	100.0	29	100.0	27	100.0	139	100.0

$$\chi^2 = 4.7969$$

$$d.f. = 3$$

$$C = 0.1826$$

$$\text{level of significance} < 0.250$$





TABLE XXXVIII

OPERATORS' WILLINGNESS TO MIGRATE FROM THE FARMS AND TOTAL  
NET FAMILY INCOME, 1965

Operators' Willingness to migrate from the farms	Net Family Income									
	Under \$500		\$500-\$1,499		\$1500-\$2499		\$2500 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Yes	8	40.0	17	53.1	12	40.0	22	38.6	59	42.4
No	12	60.0	15	46.9	18	60.0	35	61.4	80	57.6
Total	20	100.0	32	100.0	30	100.0	57	100.0	139	100.0

$$\chi^2 = 1.9620 \quad \text{d.f.} = 3 \quad C = 0.1180 \quad \text{level of significance} < 0.500$$

TABLE XXXIX

FARM OPERATORS' EQUITY IN FARM BUSINESS AND WILLINGNESS TO LEAVE  
FARMING FOR A NON-FARM JOB, BONNYVILLE MUNICIPAL DISTRICT, 1965.

Operator's Equity %	Willingness to Migrate					
	Yes		No		Total	
	Number	Percent	Number	Percent	Number	Percent
60 and under	5	41.7	7	58.3	12	100.0
61 - 74	5	25.0	15	75.0	20	100.0
75 & over	49	45.8	58	54.2	107	100.0
Total	59	42.4	80	57.6	139	100.0

$$\chi^2 = 3.001 \quad \text{d.f.} = 2 \quad C = 0.0211$$



TABLE XL

SUMMARY OF CHI-SQUARE ( $\chi^2$ ) COEFFICIENTS, PEARSON'S  
CONTINGENCY COEFFICIENT AND LEVEL OF SIGNIFICANCE  
DEPENDENT VARIABLE - WILLINGNESS TO LEAVE FARM

Independent Variable	Chi-Square Coefficient	Pearson's Coefficient	Level of Significance
Operator's Experience	3.5611	0.1580	.250
Ethnic Origin	15.4900	0.3166	.005
Religion	0.8356	0.0773	n.s. <sup>a</sup>
Age of Operator	3.6712	0.1604	.250
No. of Children	0.8816	0.0794	n.s.
Operator's Education	0.4811	0.0587	n.s.
Additional Training	0.1283	n.a. <sup>b</sup>	n.s.
Source of Job Information	0.1018	n.a.	n.s.
Job Preference	45.8374	n.a.	.005
Knowledge of Job Opportunities	1.3237	0.0954	n.s.
Total Acres Operated in '65	6.8163	0.2162	.05
Operator's Debt	1.0986	0.0886	n.s.
Gross Income	1.2503	0.0944	n.s.
Net Farm Income	4.7969	0.1826	n.s.
Net Family Income	1.9620	0.1180	n.s.

<sup>a</sup>levels of significance greater than 0.250 not entered in Table.

<sup>b</sup>these coefficients were not available from the computer program.





TABLE XLI

AGE OF OPERATORS AND TOTAL ACRES  
OPERATED IN 1965

Age of Operators	80-240		Total number of acres operated				Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
15-34	8	22.2	19	52.8	9	25.0	36	100.0
35-49	7	10.4	43	64.2	17	25.4	67	100.0
50 and over	11	26.8	28	68.3	2	4.9	41	100.0
Total	26	18.1	90	62.5	28	19.4	144	100.0

$$\chi^2 = 11.2932 \quad \text{d.f.} = 4 \quad C = 0.2697 \quad \text{level of significance} < 0.025$$

TABLE XLII

NUMBER OF YEARS SCHOOLING COMPLETED AND TOTAL ACRES  
OPERATED IN 1965

Number of Yrs. Schooling Completed	80-240		Total acres operated				Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 4	4	15.4	19	21.1	1	3.6	24	16.7
5 - 8	14	53.8	47	52.2	15	53.6	76	52.8
9 and over	8	30.8	24	26.7	12	42.9	44	30.5
Total	26	100.0	90	100.0	28	100.0	144	100.0

$$\chi^2 = 5.8201 \quad \text{d.f.} = 4 \quad C = 0.1971 \quad \text{level of significance} < 0.250$$



TABLE XLIII

NUMBER OF YEARS OF SCHOOLING COMPLETED AND  
NET FARM INCOME REPORTED BY OPERATORS, 1965

No. of years Schooling Completed	Net Farm Income									
	Under \$500		\$500-\$1499		\$1500-\$2499		\$2500 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
0 - 4	5	20.8	10	41.7	7	29.2	2	8.3	24	100.0
5 - 8	26	34.2	16	21.1	19	25.0	15	19.7	76	100.0
9 & over	17	38.6	12	27.3	4	9.1	11	25.0	44	100.0
Total	48	33.3	38	26.4	30	20.8	28	19.4	144	100.0

$$\chi^2 = 11.0407 \quad \text{d.f.} = 6 \quad C = 0.2669 \quad \text{level of significance} < 0.100$$

TABLE XLIV

NUMBER OF YEARS OF FORMAL SCHOOLING COMPLETED AND  
OPERATOR'S NON-FARM WAGES, 1964

No. of years schooling completed by Operators	Operator's Non-Farm Wages							
	Under \$500		\$500-\$1499		\$1500 & over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 4	22	91.7	0	0.0	2	8.3	24	100.0
5 - 8	60	78.9	7	9.2	9	11.8	76	100.0
9 and over	30	68.2	4	9.1	10	22.7	44	100.0
Total	112	77.8	11	7.6	21	14.6	144	100.0

$$\chi^2 = 6.3656 \quad \text{d.f.} = 4 \quad C = 0.2058 \quad \text{level of significance} < 0.250$$





TABLE XLV  
SUMMARY OF CHI-SQUARE (<sup>2</sup>) COEFFICIENTS  
PEARSON'S CONTINGENCY COEFFICIENT  
AND LEVEL OF SIGNIFICANCE

CROSS-CLASSIFICATION OF INDEPENDENT  
VARIABLES

Variable 1	Variable 2	Chi-Square Coefficient	Pearson's Coefficient	Level of Significance (Percent)
Ethnic origin	Total cash income	28.5873	0.4070	.005
Ethnic origin	Total gross income	31.0511	0.4212	.005
Operator's education	Distance to P.T.jobs <sup>a</sup>	8.8921	0.2412	.025
Operator's education	Distance to F.T.jobs <sup>a</sup>	6.2351	0.2037	.05
Operator's education	Total cash income	13.9621	0.2973	.05
Age of operator	Operator's education	56.3094	0.5302	.005
Age of operator	Acres operated in '65	11.2932	0.2697	.025
Age of operator	Operator's debt	21.3863	0.3596	.005
Age of operator	Net income	18.9623	0.3411	.005
Additional training	Non-farm wages	5.8120	0.3562	.05
Knowledge of (FT) job opportunities	Total gross income	7.7313	0.2257	.05
Knowledge of (FT) job opportunities	Non-farm wages	8.1869	0.2319	.025
Job preference	Net farm income	11.8912	0.2865	.01
Total acres operated	Total cash income	38.3052	0.4584	.005
Total acres operated	Total net income	18.5136	0.3375	.005
Operator's debt	Total improved acres	28.0826	0.4040	.005
Improved acres	Total cash income	53.2642	0.5196	.005
Operator's debt	Total acres operated in 1965	17.1010	0.3258	.01

<sup>a</sup>Indicator of knowledge of job opportunities.



TABLE XLVI

FARM OPERATOR'S EDUCATION AND SOCIAL  
PARTICIPATION, BONNYVILLE MUNICIPAL  
DISTRICT, 1965.

Social Participation Score	Years of Schooling Completed							
	0 - 4		5 - 8		9 and over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 11	18	69.2	52	69.4	22	51.2	92	63.9
12 - 23	7	26.9	19	25.3	17	39.5	43	29.9
24 - 35	1	3.9	4	5.3	4	9.3	9	6.2
Total	26	100.0	75	100.0	43	100.0	144	100.0

$$\chi^2 = 4.453 \quad \text{d.f.} = 4 \quad C = 0.17 \quad \text{level of significance} < 0.500$$

TABLE XLVII

SOCIAL PARTICIPATION SCORES FOR FARM OPERATORS,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Social Participation Classes	Operators Reporting	
	Number	Percent
0 - 5	37	25.7
6 - 10	39	27.0
11 - 15	38	26.4
16 - 20	17	11.8
21 - 25	7	4.9
26 - 30	4	2.8
31 - 35	2	1.4
Total	144	100.0





TABLE XLIII

FARM OPERATORS' EDUCATION AND LEVELS OF LIVING,  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Levels of Living	Years of Schooling Completed							
	0 - 4		5 - 8		9 and over		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
0 - 5	8	32.0	7	9.2	3	7.0	18	12.5
6 - 11	8	32.0	47	61.9	21	48.8	76	52.8
12 - 17	9	36.0	22	28.9	19	44.2	50	34.7
Total	25	100.0	76	100.0	43	100.0	144	100.0

$$\chi^2 = 14.544 \quad \text{d.f.} = 3 \quad C = .296 \quad \text{level of significance} < 0.005$$

TABLE XLIX

OPERATORS' DEBTS AND TOTAL CASH FARM INCOME, 1964

Operator's debts	Total Cash Farm Income									
	Under \$1200		\$1200-\$2499		\$2500-\$4999		\$5000 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Under \$2000	17	65.4	20	52.6	20	41.7	9	28.1	66	45.8
\$2000-\$4999	7	26.9	9	23.7	5	10.4	5	15.6	26	18.1
\$5000-\$9999	1	3.8	5	13.2	18	37.5	6	18.8	30	20.8
\$10000 & over	1	3.8	4	10.5	5	10.4	12	37.5	22	15.3
Total	26	100.0	38	100.0	48	100.0	32	100.0	144	100.0

$$\chi^2 = 33.3918 \quad \text{d.f.} = 9 \quad C = 0.4339 \quad \text{level of significance} < 0.005$$



TABLE I

TOTAL IMPROVED ACRES OPERATED AND TOTAL NET FARM INCOME, 1965

Total Improved Acres	Total Net Farm Income									
	Under \$500		\$500-\$1499		\$1500-\$2499		\$2500 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Less than 130	11	22.9	12	31.6	3	10.0	1	3.6	27	18.8
130 - 239	13	27.1	10	26.3	6	20.0	5	17.9	34	23.6
240 & above	24	50.0	16	42.1	21	70.0	22	78.6	83	57.6
Total	48	100.0	38	100.0	30	100.0	28	100.0	144	100.0

$$\chi^2 = 14.3672 \quad \text{d.f.} = 6 \quad C = 0.3012 \quad \text{level of significance} = 0.025$$

TABLE LI

TOTAL IMPROVED ACRES OPERATED AND TOTAL FARM DEBT, 1965

Total Farm Debt										
Total Improved acres operated	<u>Under \$2000</u>		<u>\$2000-\$2499</u>		<u>\$2500-\$4999</u>		<u>\$5000 &amp; over</u>		<u>Total</u>	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
less than 130	18	66.7	5	18.5	3	11.1	1	3.7	27	18.8
130 - 239	24	70.6	6	17.6	2	5.9	2	5.9	34	23.6
240 & above	24	28.9	15	18.1	25	30.1	19	22.9	83	57.6
Total	66	45.8	26	18.1	30	20.8	22	15.3	144	100.0

$$\chi^2 = 28.0826 \quad \text{d.f.} = 6 \quad C = 0.4040 \quad \text{level of significance} < 0.005$$





TABLE LII

AGE OF OPERATOR AND TOTAL NET FARM INCOME, 1964

Age of Operator	Total Net Farm Income									
	Under \$500		\$500-\$1499		\$1500-\$2499		\$2500 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
15 - 34 years	18	50.0	9	25.0	5	13.9	4	11.1	36	100.0
35 - 49	22	32.8	11	16.4	15	22.4	19	28.4	67	100.0
50 & over	8	19.5	18	43.9	10	24.4	5	12.2	41	100.0
Total	48	33.4	38	26.4	30	20.8	28	19.4	144	100.0

$$\chi^2 = 18.9623 \quad \text{d.f.} = 6 \quad C = 0.3411 \quad \text{Level of significance} < 0.005$$

TABLE LIII

ETHNIC ORIGIN AND TOTAL CASH FARM INCOME REPORTED BY FARMERS, 1964.

Ethnic Origin	Total Cash Farm Income									
	Under \$1200		\$1200-\$2499		\$2500-\$4999		\$5000 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
French	5	11.9	7	16.7	11	26.2	19	45.2	42	100.0
Ukrainian	8	22.9	6	17.1	17	48.6	4	11.4	35	100.0
Polish	4	15.4	11	42.3	8	30.8	3	11.5	26	100.0
British	4	23.5	8	47.1	4	23.5	1	5.9	17	100.0
Other European	5	20.5	6	25.0	8	33.3	5	20.8	24	100.0
Total	26	18.1	38	26.4	48	33.3	32	22.2	144	100.0

$$\chi^2 = 28.5873 \quad \text{d.f.} = 12 \quad C = 0.4040 \quad \text{level of Significance} = 0.005$$



TABLE LIV

ETHNIC ORIGIN AND TOTAL GROSS FARM INCOME REPORTED BY  
OPERATORS, 1964

Ethnic Origin	Total Gross Income									
	Under \$1200		\$1200-\$2499		\$2500-\$4999		\$5000 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
French	3	7.1	6	14.3	8	19.0	25	59.5	42	100.0
Ukrainian	7	20.0	7	20.0	16	45.7	5	14.3	35	100.0
Polish	3	11.5	8	30.8	10	38.5	5	19.2	26	100.0
British	3	17.6	3	17.6	10	58.8	1	5.9	17	100.0
Other European	4	16.7	4	16.7	8	33.3	8	33.3	24	100.0
Total	20	13.9	28	19.4	52	36.1	44	30.6	144	100.0

$$\chi^2 = 31.0511 \quad \text{d.f.} = 12 \quad C = 0.4212 \quad \text{level of significance} < 0.005$$

TABLE LV

ETHNIC ORIGIN AND TOTAL NET FARM INCOME  
BONNYVILLE MUNICIPAL DISTRICT, 1965

Ethnic Origin	Total Net Farm Income									
	Under \$500		\$500-\$1499		\$1500-\$2499		\$2500 & over		Total	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent	No.	Percent
French	9	21.4	7	16.7	11	26.2	15	53.6	42	100.0
Ukrainian	15	42.9	9	25.7	7	20.0	4	14.3	35	100.0
Polish	7	26.9	11	42.3	4	15.4	4	14.3	26	100.0
British	8	47.1	5	29.4	3	17.6	1	3.6	17	100.0
Other European	9	37.5	6	25.0	5	20.8	4	14.3	24	100.0
Total	48	33.3	38	26.4	30	20.8	28	19.5	144	100.0

$$\chi^2 = 18.0695 \quad \text{d.f.} = 12 \quad C = 0.3339 \quad \text{level of significance} < 0.100$$







**B29844**